NACOmatic

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INSTRUMENT APPROACH PROCEDURE CHARTS

A IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

NAME	ALTERNATE MINIMUMS
ABERDEEN, SD	
ABERDEEN RGNL	**RNAV (GPS) Rwy 13**
	RNAV (GPS) Rwy 31
	RNAV (GPS) Rwy 35
	VOR Rwy 31
	VOR/DME Rwy 13
NA when local weather not available.	
ALBERT LEA, MN	
ALBERT LEA MUNI	**RNAV (GPS) Rwy 16**
NA when local weather not available.	
ALEXANDRIA, MN	
CHANDLER FIELD	**RNAV (GPS) Rwy 22**
	RNAV (GPS) Rwy 31
NA when local weather not available.	
AUSTIN, MN	
AUSTIN MUNI	**RNAV (GPS) Rwy 17**
	RNAV (GPS) Rwy 35
	VOR/DME-A
NA when local weather not available.	
BAUDETTE, MN	
BAUDETTE INTL	**RNAV (GPS) Rwy 12[1]**
	RNAV (GPS) Rwy 30[1]
	VOR/DME Rwy 12
	VOR Rwy 30
Category C, 800-2¼; Category D, 800-2½.	
[1]NA when local weather not available.	
BEMIDJI, MN	
BEMIDJI RGNL	**RNAV (GPS) Rwy 13**
	RNAV (GPS) Rwy 25
	RNAV (GPS) Rwy 31
NA when local weather not available.	
BENSON, MN	
BENSON MUNI	**RNAV (GPS) Rwy 14**
	RNAV (GPS) Rwy 32
NA when local weather not available.	

NAME	ALTERNATE MINIMUMS
BISMARCK, ND	
BISMARCK MUNI	**ILS Rwy 13[1,2]**
	ILS Rwy 31[1,2]
	RADAR-1[3]
[1]ILS, Category D, 800-2½; Category E, 900-3. LOC, NA.	
[2]NA when control tower not in operation.	
[3]NA when control tower closed.	
BRAINERD, MN	
BRAINERD LAKES RGNL	**ILS or LOC Rwy 23**
	RNAV (GPS) Rwy 12
	RNAV (GPS) Rwy 23
	RNAV (GPS) Rwy 30
	RNAV (GPS) Rwy 34
NA when local weather not available.	
BROOKINGS, SD	
BROOKINGS RGNL	**RNAV (GPS) Rwy 12**
	RNAV (GPS) Rwy 30
NA when local weather not available.	
CANBY, MN	
MYERS FIELD	**RNAV (GPS) Rwy 12**
	RNAV (GPS) Rwy 30
NA when local weather not available.	
CLOQUET, MN	
CLOQUET CARLTON COUNTY	**RNAV (GPS) Rwy 35**
NA when local weather not available.	
COOK, MN	
COOK MUNI	**RNAV (GPS) Rwy 31**
NA when local weather not available.	
CROOKSTON, MN	
CROOKSTON MUNI-KIRKWOOD FIELD	**RNAV (GPS) Rwy 13[1]**
	RNAV (GPS) Rwy 31[1]
	VOR Rwy 31[2]
[1]NA when local weather not available.	
[2]Category A,B, 900-2; Category C, 900-2¼.	

03 JUN 2010 to 01 JUL 2010

NAME ALTERNATE MINIMUMS

DETROIT LAKES, MN

DETROIT LAKES-
WETHING FIELD ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
NA when local weather not available.
Category D, 800-2¼.

DEVILS LAKE, ND

DEVILS LAKE RGNL ..... **RNAV (GPS) Rwy 3**
RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 21
RNAV (GPS) Rwy 31
VOR Rwy 3[1]
VOR Rwy 21[2]
NA when local weather not available.
[1]Categories A,B, 900-2; Category C, 900-2½; Category D, 900-2¾.
[2]Category C, 800-2¼, Category D, 800-2½.

DICKINSON, ND

DICKINSON-THEODORE
ROOSEVELT RGNL ..... **RNAV (GPS) Rwy 14**
RNAV (GPS) Rwy 32
VOR-A
NA when local weather not available.

DODGE CENTER, MN

DODGE CENTER ..... **RNAV (GPS) Rwy 16**
RNAV (GPS) Rwy 34
VOR-A
NA when local weather not available.

DULUTH, MN

DULUTH INTL ..... **COPTER ILS Rwy 9[1]**
ILS or LOC Rwy 9[2]
ILS or LOC Rwy 27[3]
VOR or TACAN Rwy 3[4]
[1]LOC, NA.
[2]ILS, Category E, 900-2½; LOC, Category E, 800-2½.
[3]ILS, Category E, 700-2¼; LOC, Category E, 800-2¼.
[4]Category E, 800-2¼.

EVELETH, MN

EVELETH-VIRGINIA
MUNI ..... **VOR/DME or GPS-A**
Category C, 800-2¼; Category D,800-2½.

FAIRMONT, MN

FAIRMONT MUNI ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
VOR Rwy 13
VOR Rwy 31
NA when local weather not available.

NAME ALTERNATE MINIMUMS

FARGO, ND

HECTOR INTL ..... **ILS or LOC Rwy 18[1]**
ILS or LOC Rwy 36[1]
RNAV (GPS) Rwy 18[2]
RNAV (GPS) Rwy 36[2]
VOR/DME or TACAN Rwy 18[2]
VOR or TACAN Rwy 36[3]
[1]ILS, Category E, 700-2¼. LOC, Category E, 800-2¼.
[2]Category E, 800-2¼.
[3]Category D, 800-2¼, Category E, 800-2½.

FERGUS FALLS, MN

FERGUS FALLS MUNI-EINAR
MICKELSON FIELD ..... **ILS or LOC Rwy 31[1]**
NDB Rwy 31[2]
RNAV (GPS) Rwy 31[2]
RNAV (GPS) Rwy 35
NA when local weather not available.
[1]ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.
[2]Category D, 800-2¼.

GLENCOE, MN

GLENCOE MUNI ..... **RNAV (GPS) Rwy 31**
NA when local weather not available.

GRAND FORKS, ND

GRAND FORKS INTL ... **ILS or LOC Rwy 35L[12]**
LOC BC Rwy 17R[13]
RNAV (GPS) Rwy 9L[3]
RNAV (GPS) Rwy 17R[3]
RNAV (GPS) Rwy 27R[3]
RNAV (GPS) Rwy 35L[3]
VOR Rwy 17R[3]
VOR Rwy 35L[3]
[1]NA when control tower closed.
[2]ILS, Category E, 700-2½. LOC, Category E, 800-2½.
[3]NA when local weather not available.

GRAND MARAIS, MN

GRAND MARAIS/
COOK COUNTY ..... **RNAV (GPS) Rwy 27**
NA when local weather not available.

GRAND RAPIDS, MN

GRAND RAPIDS/ITASCA CO-
GORDON NEWSTROM .... **RNAV (GPS) Rwy 16**
RNAV (GPS) Rwy 34
VOR Rwy 34
NA when local weather not available.

GRANITE FALLS, MN

GRANITE FALLS MUNI/LENZEN-ROE
MEMORIAL FIELD ..... **RNAV (GPS) Rwy 33**
NA when local weather not available.

NAME ALTERNATE MINIMUMS

HETTINGER, ND

HETTINGER MUNI ..... **RNAV (GPS) Rwy 30**
NA when local weather not available.
Category D, 800-2¼.

HIBBING, MN

RANGE RGNL ..... **ILS OR LOC/DME Rwy 13**[1]
VOR Rwy 13[2]
[1]ILS,Categories A,B,C,D, 800-2.
[2]Categories A,B, 900-2; Category C, 900-2½; Category D, 900-2¾; ILS, 700-2.

HURON, SD

HURON RGNL ..... **ILS or LOC Rwy 12**[12]
LOC/DME BC Rwy 30[23]
RNAV (GPS) Rwy 12[23]
RNAV (GPS) Rwy 30[23]
VOR Rwy 12[23]
[1]ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.
[2]NA when local weather not available.
[3]Category D, 800-2¼.

INTERNATIONAL FALLS, MN

FALLS INTL ..... **COPTER ILS or LOC Rwy 31**[1]
ILS or LOC/DME Rwy 13,700-2[2]
ILS or LOC Rwy 31[2]
RNAV (GPS) Rwy 13[2]
RNAV (GPS) Rwy 31[2]
VOR Rwy 13[23]
VOR/DME Rwy 31[2]
[1]LOC, NA; ILS, NA when local weather not available.
[2]NA when local weather not available.
[3]Category D, 800-2¼.

JACKSON, MN

JACKSON MUNI ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
NDB Rwy 13
NA when local weather not available.

JAMESTOWN, ND

JAMESTOWN RGNL ..... **RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 31
VOR Rwy 31
NA when local weather not available.

LANGDON, ND

ROBERTSON FIELD ..... **RNAV (GPS) Rwy 14**
RNAV (GPS) Rwy 32
NA when local weather not available.

NAME ALTERNATE MINIMUMS

MANKATO, MN

MANKATO RGNL ..... **RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 15
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 33
VOR Rwy 15
VOR Rwy 33
NA when local weather not available.

MAPLE LAKE, MN

MAPLE LAKE MUNI ..... **VOR-A**
NA when local weather not available.

MARSHALL, MN

SOUTHWEST MINNESOTA RGNL MARSHALL/ RYAN FLD ..... **RNAV (GPS) Rwy 12**
VOR Rwy 12
NA when local weather not available.

MINNEAPOLIS, MN

AIRLAKE ..... **VOR Rwy 12**
NA when local weather not available.
Category D, 800-2¼.

ANOKA COUNTY-BLAINE ARPT (JANES FIELD) ..... **ILS or LOC/DME Rwy 27**
RNAV (GPS) Rwy 9
RNAV (GPS) Rwy 18
RNAV (GPS) Rwy 27
VOR Rwy 9
VOR/DME Rwy 27
NA when local weather not available.

CRYSTAL ..... **RNAV (GPS) Rwy 14L**
NA when local weather not available.

FLYING CLOUD ..... **COPTER ILS or LOC Rwy 10R**[1]
ILS or LOC Rwy 10R[1]
RNAV (GPS) Rwy 10L
RNAV (GPS) Rwy 28R
VOR Rwy 10R
VOR/DME Rwy 36
NA when local weather not available.
[1]NA when control tower closed.

NAME ALTERNATE MINIMUMS

MINNEAPOLIS, MN (CON'T)

MINNEAPOLIS-ST. PAUL INTL/
WOLD CHAMBERLAIN ..... **ILS Rwy 4[1]**
ILS or LOC Rwy 12L[2]
ILS or LOC Rwy 12R[1]
ILS or LOC Rwy 30L[1]
ILS or LOC Rwy 30R[2]
ILS or LOC Rwy 35[3]
LOC Rwy 4[4]
LOC Rwy 22[4]
RNAV (GPS) Rwy 4[4]
RNAV (GPS) Rwy 12L[5]
RNAV (GPS) Rwy 12R[4]
RNAV (GPS) Rwy 22[4]
RNAV (GPS) Rwy 30L[4]
RNAV (GPS) Rwy 30R[4]
RNAV (GPS) Z Rwy 35[6]

[1]ILS, Category D, 700-2; Category E, 900-3. LOC, Category E, 900-3.
[2]ILS, Categories A, B, C, 700-2; Category D, 700-2¼; Category E, 900-3. LOC, Category D, 800-2¼; Category E, 900-3.
[3]ILS, Categories A, B, 800-2; Category C, 800-2¼; Category D, 800-2½; Category E, 900-3. LOC, Category C, 800-2¼; Category D, 800-2½; Category E, 900-3.
[4]Category E, 900-3.
[5]Category D, 800-2¼; Cateogry E, 900-3.
[6]Category D, 800-2¼.

MINOT, ND

MINOT INTL ..... **ILS or LOC Rwy 31[1,2]**
LOC/DME BC Rwy 13[1]
RNAV (GPS) Rwy 8
RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 26
RNAV (GPS) Rwy 31
VOR Rwy 8[3]
VOR Rwy 26[4]

NA when local weather not available.
[1]NA when tower closed.
[2]Category E, 1100-3.
[3]Categories A, B, 1100-2; Categories C, D, 1100-3.
[4]Categories A,B, 900-2; Category C,900-2½; Category D,900-2¾.

MITCHELL, SD

MITCHELL MUNI ..... **RNAV (GPS) Rwy 12**
RNAV (GPS) Rwy 30
VOR Rwy 12
VOR Rwy 30[1]

NA when local weather not available.
[1]Categories A,B, 1000-2; Categories C,D, 1000-3.

NAME ALTERNATE MINIMUMS

MOBRIDGE, SD

MOBRIDGE MUNI ..... **RNAV (GPS) Rwy 12[1]**
RNAV (GPS) Rwy 30[2]

NA when local weather not available
[1]Category D, 900-2¾.
[2]Category C, 800-2¼; Category D, 900-2¾.

MORRIS, MN

MORRIS MUNI-CHARLIE
SCHMIDT FLD ..... **RNAV (GPS) Rwy 14**
RNAV (GPS) Rwy 32

NA when local weather not available.

PINE RIDGE, SD

PINE RIDGE ..... **RNAV (GPS) Rwy 30**

NA when local weather not available.
Categories A,B, 900-2.

PIPESTONE, MN

PIPESTONE MUNI ..... **NDB Rwy 36**
RNAV (GPS) Rwy 18
RNAV (GPS) Rwy 36

NA when local weather not available.

PRESTON, MN

FILLMORE COUNTY ..... **RNAV (GPS) Rwy 29**

NA when local weather not available.

RAPID CITY, SD

RAPID CITY RGNL ..... **ILS or LOC Rwy 32[1]**
RNAV (GPS) Rwy 14[2]
RNAV (GPS) Rwy 32[2]
VOR or TACAN Rwy 14[2]
VOR or TACAN Rwy 32[2]

NA when local weather not available.
[1]ILS, Category D, 700-2; Category E, 800-2¾. LOC, Category E, 800-2¾.
[2]Category E, 800-2¼.

RED WING, MN

RED WING RGNL ..... **RNAV (GPS) Rwy 27**

NA when local weather not available.
Categories A, B, 1100-2; Category C, 1100-3.

REDWOOD FALLS, MN

REDWOOD FALLS
MUNI ..... **RNAV (GPS) Rwy 30**
VOR-A

Category D, 800-2¼.
NA when local weather not available.

ROCHESTER, MN

ROCHESTER INTL ..... **ILS or LOC Rwy 13**
ILS or LOC Rwy 31
COPTER ILS or LOC Rwy 31

NA when control tower closed.

NAME ALTERNATE MINIMUMS

ROSEAU, MN

ROSEAU MUNI/
RUDY BILLBERG FIELD . **RNAV (GPS) Rwy 16**
RNAV (GPS) Rwy 34
NA when local weather not available.

ST. CLOUD, MN

ST. CLOUD RGNL . **ILS or LOC/DME Rwy 13[1][2][3]**
RNAV (GPS) Rwy 5[1]
RNAV (GPS) Rwy 13[1]
RNAV (GPS) Rwy 23[1]
RNAV (GPS) Rwy 31[1]
VOR/DME Rwy 13[1][2]
VOR Rwy 31[1][2]
[1]NA when local weather not available.
[2]NA when control tower closed.
[3]ILS,Categories, A, B, C, D, 700-2.

ST. PAUL, MN

ST. PAUL DOWNTOWN HOLMAN
FIELD ..... **ILS or LOC Rwy 14[1][2]**
ILS or LOC Rwy 32[1][3]
RNAV (GPS) Rwy 14[3]
RNAV (GPS) Rwy 32[4]
[1]NA when local weather not available.
[2]ILS,LOC, Categories A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.
[3]Categories A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.
[4]Categories A,B,C, 900-2½; Category D, 900-2¾.

SIOUX FALLS, SD

JOE FOSS FIELD ..... **ILS Rwy 3[1][2]**
ILS Rwy 21[1]
RADAR-1[3]
VOR or TACAN Rwy 15[4]
VOR/DME or TACAN Rwy 33[3]
[1]NA when control tower closed.
[2]LOC, NA.
[3]Category E, 800-2¾.
[4]Category E, 900-3.

SOUTH ST. PAUL, MN

SOUTH ST. PAUL MUNI-RICHARD E
FLEMING FIELD ..... **RNAV (GPS) Rwy 34**
Category D, 800-2¼.
NA when local weather not available.

THIEF RIVER FALLS, MN

THIEF RIVER
FALLS RGNL ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
VOR Rwy 13
NA when local weather not available.

NAME ALTERNATE MINIMUMS

VERMILLION, SD

HAROLD DAVIDSON
FIELD ..... **RNAV (GPS) Rwy 30**
NA when local weather not available.

WARROAD, MN

WARROAD INTL
MEMORIAL ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
NA when local weather not available.

WASECA, MN

WASECA MUNI ..... **RNAV (GPS) Rwy 15**
NA when local weather not available.

WATERTOWN, SD

WATERTOWN RGNL ..... **LOC/DME BC Rwy 17**
NDB Rwy 35
RNAV (GPS) Rwy 12
RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 30
RNAV (GPS) Rwy 35
VOR or TACAN Rwy 17
NA when local weather not available.

WILLISTON, ND

SLOULIN FIELD INTL.....**VOR or GPS Rwy 11**
Category D, 800-2¼.

WILLMAR, MN

WILLMAR MUNI-JOHN
L RICE FIELD ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
VOR Rwy 13
VOR Rwy 31[1]
NA when local weather not available.
[1]Category D, 800-2¼.

WINDOM, MN

WINDOM MUNI ..... **NDB Rwy 17**
Category C, 800-2¼.

WINNER, SD

WINNER RGNL ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
VOR-A
NA when local weather not available.

WORTHINGTON, MN

WORTHINGTON
MUNI ..... **VOR or GPS Rwy 11**
Category D, 800-2¼.

YANKTON, SD

CHAN GURNEY MUNI ... **RNAV (GPS) Rwy 13[1]**
VOR Rwy 13[1]
VOR Rwy 31[2]
[1]NA when local weather not available.

BISMARCK, ND

Amdt. 3A, DEC 13, 2002 (FAA)

ELEV **1661**

BISMARCK MUNI

RADAR - 126.3 298.9

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	13		AB	**2100**-1	445	(500-1)	C	**2100**-1¼	445	(500-1¼)
			D	**2100**-1½	445	(500-1½)				
	31		AB	**2100**/24	455	(500-½)	C	**2100**/40	455	(500-¾)
			D	**2100**/50	455	(500-1)				
	21		AB	**2120**-1	459	(500-1)	C	**2120**-1¼	459	(500-1¼)
			D	**2120**-1½	459	(500-1½)				
	3		AB	**2120**-1	459	(500-1)	C	**2120**-1¼	459	(500-1¼)
			D	**2120**-1½	459	(500-1½)				
CIRCLING			A	**2180**-1	519	(600-1)	B	**2220**-1	539	(600-1)
			C	**2220**-1½	559	(600-1½)	D	**2240**-2	579	(600-2)

Inoperative table does not apply to MALS Rwy 13.

DULUTH, MN

Amdt. 20, OCT 7, 1999 (FAA)

ELEV **1428**

DULUTH INTL

RADAR - 125.45 255.9

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	3		ABC	**1820**-1	400	(400-1)	D	**1820**-1¼	400	(400-1¼)
			E	**1820**-1½	400	(400-1½)				
	27		AB	**1860**/24	439	(500-½)	C	**1860**/40	439	(500-¾)
			DE	**1860**/50	439	(500-1)				
	21		AB	**1860**-1	440	(500-1)	C	**1860**-1¼	440	(500-1¼)
			DE	**1860**-1½	440	(500-1½)				
	9		AB	**1880**/24	452	(500-½)	C	**1880**/40	452	(500-¾)
			DE	**1880**/50	452	(500-1)				
CIRCLING			AB	**1920**-1	492	(500-1)	C	**1920**-1½	492	(500-1½)
			DE	**1980**-2	552	(600-2)				

Category E circling NA southeast of Rwys 3 and 27.

ELLSWORTH AFB (KRCA) (Rapid City), SD (Amdt 1, 08045 USAF) ELEV **3276**

RADAR - (E) 119.5 259.1[1]

	RWY	GS/TCH/RPI	CAT	DH/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	13[2]		AB	**3820**/40	544	(600-¾)
			C	**3820**/50	544	(600-1)
			D	**3820**/60	544	(600-1¼)
			E	**3820**-1½	544	(600-1½)
	31[2]		AB	**3820**/40	628	(600-¾)
			C	**3820**/60	628	(600-1¼)
			D	**3820**-1½	628	(600-1½)
			E	**3820**-1¾	628	(600-1¾)
CIR	All Rwy[3]		A	**3860**-1¼	584	(600-1¼)
			B	**3880**-1¼	604	(700-1¼)
			C	**3880**-1¾	604	(700-1¾)
			D	**3880**-2	604	(700-2)
			E	**4040**-2¾	764	(800-2¾)

[1]Opr 1300-0730Z++ Mon-Thu, 1300-0500Z++ Fri. 1400-0500Z++ Sat, Sun and hol. [2]When ALS inop, increase CAT AB RVR to 60 and vis to 1¼, increase CAT CDE vis ½ mile. [3]CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within class D airspace.

MANDAN, ND Amdt. 4, NOV 09, 1995 (FAA) ELEV **1942**

MANDAN MUNI

RADAR - 126.3 298.9 ⚠ NA

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HAT/ HAA	CEIL-VIS
ASR	31		AB	**2360**-1	418	(500-1)	CD	**2360**-1¼	418	(500-1¼)
	13		AB	**2460**-1	520	(600-1)	C	**2460**-1½	520	(600-1½)
			D	**2460**-1¾	520	(600-1¾)				
CIRCLING			A	**2460**-1	518	(600-1)	B	**2500**-1	558	(600-1)
			C	**2500**-1½	558	(600-1½)	D	**2500**-2	558	(600-2)

Use Bismarck altimeter setting.
When Bismarck control tower closed, ASR NA.

ROCHESTER, MN
Amdt. 8, JAN 15, 2009 (FAA) ELEV **1317**

ROCHESTER INTL
RADAR - 119.8 251.125 V

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	2		ABC	**1680**-1	363	(400-1)	D	**1680**-1¼	363	(400-1¼)
	13		ABC	**1640**/24	360	(400-½)	D	**1640**/50	360	(400-1)
	20		ABC	**1660**-1	356	(400-1)	D	**1660**-1¼	356	(400-1¼)
	31		ABC	**1660**/24	356	(400-½)	D	**1660**/50	356	(400-1)
CIRCLING			A	**1720**-1	403	(500-1)	B	**1780**-1	463	(500-1)
			C	**1780**-1½	463	(500-1½)	D	**1880**-2	563	(600-2)

When control tower closed, procedure NA. For inoperative MALSR, increase S-13 and S-31 Cat D visibility to RVR 6000. Visibility reduction by helicopters NA Rwy 2-20.

SIOUX FALLS, SD
Amdt. 10A, OCT 3,2003 (FAA) ELEV **1429**

JOE FOSS FIELD
RADAR - 125.8 353.6 V A

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	3		AB	**1940**/24	517	(600-½)	C	**1940**/50	517	(600-1)
			DE	**1940**/60	517	(600-1¼)				
	33		AB	**1920**-1	497	(500-1)	C	**1920**-1¼	497	(500-1¼)
			D	**1920**-1½	497	(500-1½)	E	**1920**-1¾	497	(500-1¾)
	21		AB	**1960**/24	531	(600-½)	C	**1960**/50	531	(600-1)
			D	**1960**/60	531	(600-1¼)	E	**1960**-1½	531	(600-1½)
	15		AB	**1960**-1	534	(600-1)	C	**1960**-1½	534	(600-1½)
			D	**1960**-1¾	534	(600-1¾)	E	**1960**-2	534	(600-2)
CIRCLING			AB	**1960**-1	531	(600-1)	C	**1960**-1½	531	(600-1½)
			D	**2040**-2	611	(700-2)	E	**2300**-3	871	(900-3)

When control tower closed, procedure not authorized.
Category E S-3 visibility increased 1¾ mile for inoperative MALSR.
Category E S-21 visibility increased to 2 miles for inoperative MALSR.

INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude , and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

ABERDEEN, SD

ABERDEEN RGNL (ABR)
ORIG 09239 (FAA)
NOTE: **Rwy 17,** trees 1138' from DER, 432' right of centerline, 41' AGL/1336' MSL. **Rwy 31,** multiple trees beginning 1391' from DER, 326' left of centerline, up to 65' AGL/1360' MSL.

AITKIN, MN

AITKIN MUNI-STEVE KURTZ FIELD (AIT)
AMDT 2 96172 (FAA)
TAKE-OFF MINIMUMS: **Rwys 8, 26,** 300-1. **Rwy 16,** 300-1 or std. with a min climb of 400' per NM to 1500.
DEPARTURE PROCEDURE: **Rwys 16, 26,** climb runway heading to 1700 before turning.

ALBERT LEA, MN

ALBERT LEA MUNI (AEL)
ORIG 85241 (FAA)
DEPARTURE PROCEDURE: **Rwys 16, 22,** climb runway heading to 1800 before turning on course.

ALEXANDRIA, MN

CHANDLER FIELD (AXN)
DEPARTURE PROCEDURE: **Rwys 4, 13, 22,** when weather is below 200-1, climb runway heading to 1800 before turning.

NAME TAKE-OFF MINIMUMS

APPLETON, MN

APPLETON MUNI (AQP)
ORIG-A 10126 (FAA)
DEPARTURE PROCEDURE: **Rwy 4,** climb heading 039° to 2000 before turning right. **Rwy 13,** climb heading 130° to 2500 before turning right. **Rwy 22,** climb heading 219° to 2400 before turning left. **Rwy 31,** climb heading 300° to 2000 before turning left.
NOTE: **Rwy 13,** trees beginning 91' from DER, 464' left of centerline, up to 100' AGL/1134' MSL. Trees beginning 576' from DER, 388' right of centerline, up to 100' AGL/1120' MSL. Tower 2.3 NM from DER, 2.4 right of centerline, 1283' AGL/2318' MSL.

AUSTIN, MN

AUSTIN MUNI (AUM)
ORIG 08045 (FAA)
NOTE: **Rwy 17,** Multiple trees beginning 809' from departure end of runway, 663' right of centerline, up to 61' AGL/1285' MSL. **Rwy 35,** Tree 1380' from departure end of runway, 484' right of centerline, 100' AGL/1314' MSL.

BAUDETTE, MN
BAUDETTE INTL (BDE)
AMDT 1 10154 (FAA)
DEPARTURE PROCEDURE: **Rwy 12,** climb heading 117° to 1700 before turning northbound.
NOTE: **Rwy 12,** trees, pipes, and markers beginning 61' from DER, 354' right of centerline, up to 100' AGL/1184' MSL. Trees beginning 593' from DER, 138' left of centerline, up to 21' AGL/1100' MSL. Rod on OL tank 4132' from DER, 1233' right of centerline, 120' AGL/1204' MSL. **Rwy 30,** trees beginning 15' from DER, 348' right of centerline, 12' AGL/1096' MSL. Trees beginning 2036' from DER, 532' left of centerline, 64' AGL/1143' MSL.

BELLE FOURCHE, SD
BELLE FOURCHE MUNI (EFC)
AMDT 2 09015 (FAA)
TAKE-OFF MINIMUMS: **Rwys 18,36,** NA. **Rwy 14,** std. w/ min. climb of 240' per NM to 9000 or 1400-3 for climb in visual conditions. **Rwy 32,** std. w/ min. climb of 413' per NM to 3900.
DEPARTURE PROCEDURE: **Rwy 14,** for climb in visual conditions: cross Belle Fourche Muni airport at or above 4400 MSL before proceeding on course. **Rwy 32,** climb heading 321° to 3900 before proceeding southbound.
NOTE: **Rwy 14,** trees 651' from departure end of runway, 547' left of centerline, up to 20' AGL/3299' MSL. **Rwy 32,** trees 857' from departure end of runway, 150' left of centerline, up to 20' AGL/3199' MSL. Trees 3880' from departure end of runway, 966' right of centerline, up to 20' AGL/3289' MSL.

BEMIDJI, MN
BEMIDJI RGNL (BJI)
AMDT 3 08213 (FAA)
NOTE: **Rwy 7,** vegetation beginning 859' from departure end of runway, 544' right of centerline, up to 62' AGL/1442' MSL. Vegetation beginning 1404' from departure end of runway, 683' left of centerline, up to 44' AGL/1424' MSL. **Rwy 13,** vehicle on road, 541' from departure end of runway, 525' right of centerline, 15' AGL/1398' MSL. **Rwy 25,** poles beginning 1337' from departure end of runway, 205' right of ceterline up to 61' AGL/1445' MSL. Trees beginning 1414' from departure end of runway, 254' left of centerline, up to 57' AGL/1441' MSL. Tree 1406' from departure end of runway, 233' right of centerline, 53' AGL/1437' MSL.

BENSON, MN
BENSON MUNI (BBB)
AMDT 1 09127 (FAA)
NOTE: **Rwy 14,** numerous trees beginning 838' from DER, 246' right of centerline, up to 33' AGL/1087' MSL. Numerous trees beginning 1232' from DER, 64' left of centerline, up to 69' AGL/1108' MSL. Sign 206' from DER, 198' left of centerline, 19' AGL/1044' MSL. Tower 4884' from DER, 274' right of centerline, 126' AGL/1161' MSL. **Rwy 32,** Tree 2380' from DER, 646' left of centerline, 68' AGL/1107' MSL. Multiple fences beginning 13' from DER, 361' left of centerline, up to 8' AGL/1043' MSL.

BIGFORK, MN
BIGFORK MUNI (FOZ)
ORIG -A 10126 (FAA)
TAKE-OFF MINIMUMS: **Rwy 15,** 400-1 or std. with a min. climb of 332' per NM to 1900.

BISMARCK, ND
BISMARCK MUNI (BIS)
AMDT 7 01137 (FAA)
DEPARTURE PROCEDURE: **Rwys 3, 31,** climb runway heading to 2500 before proceeding on course. **Rwys 13, 21**, climb runway heading to 3800 before proceeding south.

BOTTINEAU, ND
BOTTINEAU MUNI (D09)
AMDT 1 10154 (FAA)
TAKE-OFF MINIMUMS: **Rwys 3, 21,** NA.
DEPARTURE PROCEDURE: **Rwy 13,** climb heading 127° to 2200 before turning left. **Rwy 31,** climb heading 307° to 2600 before turning right.
NOTE: **Rwy 31,** street light 116' from DER, 474' left of centerline, 16' AGL/1700' MSL.

BRAINERD, MN
BRAINERD LAKES RGNL (BRD)
AMDT 5A 10126 (FAA)
NOTE: **Rwy 12,** multiple trees beginning 165' from DER, 417' left of centerline, up to 78' AGL/1279' MSL. Multiple trees and vehicle on road beginning 304' from DER, 206' right of centerline, up to 66' AGL/1277' MSL. **Rwy 16,** multiple trees beginning 1830' from DER, 749' left of centerline, up to 74' AGL/1314' MSL. **Rwy 23,** multiple trees beginning 1495' from DER, 179' left of centerline, up to 48' AGL/1285' MSL. Tree 2437' from DER, 716' right of centerline, 50' AGL/1279' MSL. **Rwy 30,** multiple trees beginning 243' from DER, 131'left of centerline, up to 61' AGL/1287' MSL. Multiple trees 48' from DER, 328' right of centerline, up to 59' AGL/1329' MSL. **Rwy 34,** trees beginning 2341' from DER, left and right of centerline, up to 93' AGL/1293' MSL.

BRITTON, SD
BRITTON MUNI (BTN)
AMDT 2 96060 (FAA)
TAKE-OFF MINIMUMS: **Rwy 13,** 300-1 or std. with a min. climb of 450' per NM to 1600. **Rwy 19,** 300-1.
DEPARTURE PROCEDURE: **Rwy 19,** climb runway heading to 2000 before turning.

BROOKINGS, SD
BROOKINGS RGNL (BKX)
ORIG 09015 (FAA)
NOTE: **Rwy 12,** pole and trees beginning 1041' from departure end of runway, 207' left of centerline, up to 65' AGL/1705' MSL. Building 1277' from departure end of runway, 825' right of centerline, 38' AGL/1618' MSL. **Rwy 17,** vehicle on road 799' from departure end of runway, on centerline, up to 15' AGL/1687' MSL. Trees beginning 906' from departure end of runway, 464' left of centerline, up to 100' AGL/1749' MSL. **Rwy 30,** railroad beginning 547' from departure end of runway, 502' right of centerline, 23' AGL/1626' MSL. Tree 132' from departure end of runway, 433' left of centerline, 20' AGL/1615' MSL. **Rwy 35,** trees 2892' from departure end of runway, 944' right of centerline, up to 100' AGL/1709' MSL.

CANBY, MN
MYERS FIELD (CNB)
ORIG 07186 (FAA)
NOTE: **Rwy 12,** truck on road 183' from departure end of runway, 220' right of centerline, 15' AGL/1204' MSL.

CASSELTON, ND
CASSELTON ROBERT MILLER RGNL (5N8)
ORIG 07354 (FAA)
TAKE-OFF MINIMUMS: **Rwy 31,** 400-2½ or std. w/ a min. climb of 212' per NM to 1400 or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1700' prior to departure end of runway.
NOTE: **Rwy 13,** railroad 30' from departure end of runway, 505' right of centerline, 23' AGL/945' MSL. Vehicle on road 449' from departure end of runway, 300' left of centerline, 15' AGL/949' MSL. **Rwy 31,** trees 2251' from departure end of runway, 456' left of centerline, up to 100' AGL/1052' MSL.

CAVALIER, ND
CAVALIER MUNI (2C8)
ORIG 03191 (FAA)
TAKE-OFF MINIMUMS: **Rwy 16,** 300-1 or std. with a min. climb of 430' per NM to 1200.
NOTE: **Rwy 16,** grain elevator 3731' from departure end of runway, 284' left of centerline, 168' AGL/1060' MSL.

CHAMBERLAIN, SD
CHAMBERLAIN MUNI (9V9)
ORIG 10154 (FAA)
TAKE-OFF MINIMUMS: **Rwys 18, 36,** NA-Environmental.
NOTE: **Rwy 31,** fence 457' from DER, 376' left of centerline, 10' AGL/1705' MSL. Fence 1294' from DER, 424' right of centerline, 10' AGL/1722' MSL. Trees beginning 1763' from DER, 892' left of centerline, up to 100' AGL/1819' MSL. Trees beginning 189' from DER, 41' right of centerline, up to 100' AGL/1819' MSL.

CLOQUET, MN
CLOQUET CARLTON COUNTY (COQ)
AMDT 1 80248 (FAA)
TAKE-OFF MINIMUMS: **Rwy 7,** 300-1 or std. with a min. climb of 400' per NM to 1400.

CROOKSTON, MN
CROOKSTON MUNI-KIRKWOOD FIELD (CKN)
AMDT 2 07298 (FAA)
TAKE-OFF MINIMUMS: **Rwys 6, 17, 24, 35,** NA-turf runways.
NOTE: **Rwy 13,** tree 1998' from departure end of runway, 587' left of centerline, 94' AGL/970' MSL. Pole 1127' from departure end of runway, 662' left of centerline, 46' AGL/926' MSL.

CROSBY, ND
CROSBY MUNI (D50)
ORIG 10154 (FAA)
TAKE-OFF MINIMUMS: **Rwys 3, 21,** NA-Environmental.
NOTE: **Rwy 12,** hangars and poles beginning 133' from DER, 263' right of centerline, up to 35' AGL/1983' MSL. Vehicle on road 800' from DER, 200' right of centerline, 22' AGL/1967' MSL. **Rwy 30,** power line, 2100' from DER, on centerline, 60' AGL/2011' MSL.

DETROIT LAKES, MN
DETROIT LAKES-WETHING FIELD (DTL)
ORIG 05132 (FAA)
TAKE-OFF MINIMUMS: **Rwys 17, 35,** NA.
NOTE: **Rwy 31,** highway 243' from departure end of runway, 267' right of centerline, 15' AGL/1404' MSL. Railroad 534' from departure end of runway, 298' right of centerline, 23' AGL/1411' MSL.

DEVILS LAKE, ND
DEVILS LAKE RGNL (DVL)
AMDT 1A 09351 (FAA)
TAKE-OFF MINIMUMS: **Rwy 31,** 300-1 or std. with a min. climb of 350' per NM to 1600.
NOTE: **Rwy 3,** tree 1528' from DER, 319' left of centerline, 100' AGL/1490' MSL. Tree 1520' from DER, 136' right of centerline, 100' AGL/1489' MSL. **Rwy 13,** bush 266' from DER, 523' left of centerline, 17' AGL/1451' MSL. Road, light pole and antenna on building beginning 95' from DER, 414' right of centerline, up to 17' AGL/1484' MSL. **Rwy 21,** roads beginning 335' from DER, 2' right of centerline, 15' AGL/1447' MSL, multiple poles, trees and towers beginning 552' from DER 355' left of centerline, up to 123' AGL/1548' MSL. **Rwy 31,** road 470' from DER, 424' right of centerline, 15' AGL/1472' MSL. Multiple poles and trees beginning 1180' from DER, 354' left of centerline, up to 49' AGL/1545' MSL.

DICKINSON, ND
DICKINSON-THEODORE ROOSEVELT RGNL (DIK)
AMDT 1 05244 (FAA)
DEPARTURE PROCEDURE: **Rwy 25,** climb via heading 250° to 3100 before turning left.
NOTE: **Rwy 7,** road 887' from departure end of runway, on rwy centerline, 15' AGL/2631' MSL.

DODGE CENTER, MN
DODGE CENTER (TOB)
ORIG 09015 (FAA)
TAKE-OFF MINIMUMS: **Rwy 22,** NA-Environmental.
NOTE: **Rwy 16,** trees 3945' from departure end of runway, 1542' left of centerline, 100' AGL/1409' MSL.

DULUTH, MN
DULUTH INTL (DLH)
ORIG 06327 (FAA)
NOTE: **Rwy 3,** multiple trees beginning 21' from departure end of runway, 226' right of centerline, up to 68' AGL/1477' MSL. Multiple trees beginning 246' from departure end of runway, 26' left of centerline, up to 64' AGL/1473' MSL. **Rwy 9,** electrical equipment 207' from departure end of runway, 408' left of centerline, 6' AGL/1425' MSL. **Rwy 21,** tower 3762' from departure end of runway, 410' left of centerline, 92' AGL/1522' MSL. **Rwy 27,** tree 2426' from departure end of runway, 1127' right of centerline, 53' AGL/1522' MSL. Bush and multiple trees beginning 347' from departure end of runway, 484' left of centerline, up to 44' AGL/1533' MSL.

DULUTH, MN (CON'T)

SKY HARBOR (DYT)
ORIG 83174 (FAA)
TAKE-OFF MINIMUMS: **Rwy 14,** 300-1. **Rwy 32,** 1500-2 or std. with a min. climb of 360' per NM to 2300.
DEPARTURE PROCEDURE: **Rwy 14,** northwest departures (260° CW 030°) climb to 2300 via heading 260° or 030° before proceeding on course.

EAGLE BUTTE, SD

CHEYENNE EAGLE BUTTE (84D)
ORIG 96228 (FAA)
TAKE-OFF MINIMUMS: **Rwys 13,31,** 300-1.

ELY, MN

ELY MUNI (ELO)
AMDT 2 97086 (FAA)
TAKE-OFF MINIMUMS: **Rwy 12,** 300-1 or std. with a min. climb of 200' per NM to 1600.
DEPARTURE PROCEDURE: **Rwy 30,** northbound departures climb runway heading to 2000 before turning.

EVELETH, MN

EVELETH-VIRGINIA MUNI (EVM)
AMDT 2 94118 (FAA)
TAKE-OFF MINIMUMS: **Rwy 32,** 800-2 or std. with a min. climb to 330' per NM to 2300.
DEPARTURE PROCEDURE: **Rwy 27**, northwest departures (270°-050°) climb runway heading to 2200 before turning.

FAIRMONT, MN

FAIRMONT MUNI (FRM)
AMDT 3 09127 (FAA)
NOTE: **Rwy 2,** trees beginning 2466' from DER, 1105' right of centerline, up to 100' AGL/1269' MSL. **Rwy 13,** tree 2340' from DER, 1039' left of centerline, 100' AGL/1269' MSL. **Rwy 20,** trees beginning 1640' from DER, 914' right of centerline, up to 100' AGL/1289' MSL. Trees beginning 913' from DER, 449' left of centerline, up to 100' AGL/1299' MSL. **Rwy 31,** trees beginning 954' from DER, 161' left of centerline, up to 100' AGL/1299' MSL. Trees and road beginning 791' from DER, 339' right of centerline, up to 57' AGL/1226' MSL.

FARGO, ND

HECTOR INTL (FAR)
AMDT 4 04330 (FAA)
TAKE-OFF MINIMUMS: **Rwys 13,31,** NA.
NOTE: **Rwy 9,** multiple light poles 1124' from departure end of runway, 305' left of centerline, 20' AGL/927' MSL.

FERGUS FALLS, MN

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)
ORIG 09239 (FAA)
NOTE: **Rwy 13,** trees beginning 2612' from DER, 128' right of centerline, up to 100' AGL/1269' MSL. Trees beginning 2514' from DER, 42' left of centerline, up to 100' AGL/1259' MSL. **Rwy 17,** trees beginning 1100' from DER 663' right of centerline, up to 100' AGL/1269' MSL. Road 222' from DER, 469' right of centerline, 15' AGL/1173' MSL. **Rwy 35,** trees beginning 2156' from DER, 176' right of centerline, up to 100' AGL/1289' MSL.

FOSSTON, MN

FOSSTON MUNI (FSE)
AMDT 1 87351 (FAA)
TAKE-OFF MINIMUMS: **Rwys 14, 32,** IFR takeoff not authorized.
DEPARTURE PROCEDURE: **Rwy 16,** climb runway heading to 2000 before turning.

GETTYSBURG, SD

GETTYSBURG MUNI (0D8)
AMDT 1 07018 (FAA)
NOTE: **Rwy 4,** multiple trees beginning 1011' from departure end of runway, 420' left of centerline, up to 60' AGL/2119' MSL. **Rwy 13,** multiple trees beginning 1897' from departure end of runway, 975' left of centerline, 60' AGL/2119' MSL. **Rwy 22,** multiple trees beginning 679' from departure end of runway, 117' left of centerline, up to 60' AGL/2109' MSL.

GLENCOE, MN

GLENCOE MUNI (GYL)
ORIG 09071 (FAA)
NOTE: **Rwy 13,** trees beginning349' from DER, 257' right of centerline, up to 100' AGL/1099' MSL. Trees beginning 1211' from DER, 314' left of centerline, up to 100' AGL/1109' MSL. Terrain beginning 53' from DER, 166' left of centerline, up to 998' MSL. Terrain beginning 286' from DER, 435' right of centerline, up to 1001' MSL. **Rwy 31,** trees beginning 501' from DER, 530' right of centerline, up to 100' AGL/1099' MSL. Tree 2577' from DER, 129' left of centerline, 100' AGL/1109' MSL.

GLENWOOD, MN

GLENWOOD MUNI (GHW)
AMDT 2 98337 (FAA)
TAKE-OFF MINIMUMS: **Rwy 5,** 1200-2 or std. with a min. climb of 220' per NM to 2900.

GRAFTON, ND

HUTSON FIELD (GAF)
ORIG 97086 (FAA)
TAKE-OFF MINIMUMS: **Rwy 35,** 400-2 or std. with a min. climb of 420' per NM to 1300.

GRAND FORKS, ND

GRAND FORKS INTL (GFK)
AMDT 2 09071 (FAA)
NOTE: **Rwy 9L,** tree 127' from DER, 451' left of centerline, 12' AGL/853' MSL. **Rwy 27R,** bush 38' from DER, 474' right of centerline, 5' AGL/844' MSL. **Rwy 35L,** obstruction light on DME 645' from DER, 198' left of centerline, 21' AGL/860' MSL. **Rwy 35R,** tree 1259' from DER, 521' right of centerline, 41' AGL/880' MSL. Tree 1655' from DER, 271' left of centerline, 45' AGL/884' MSL.

GRAND MARAIS, MN
GRAND MARAIS/COOK COUNTY (CKC)
ORIG 09015 (FAA)
NOTE: **Rwy 9,** trees beginning 58' from departure end of runway, 168' right of centerline up to 54' AGL/1833' MSL. Bushes 112' from departure end of runway, 142' left of centerline, 11' AGL/1805' MSL. Tree 464' from departure end of runway, 75' left of centerline, 14' AGL/1813' MSL. **Rwy 27,** trees beginning 85' from departure end of runway, 187' left of centerline, up to 59' AGL/1858' MSL. Trees beginning 282' from departure end of runway, 115' right of centerline, up to 42' AGL/1861' MSL.

GRAND RAPIDS, MN
GRAND RAPIDS/ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)
AMDT 4 09127 (FAA)
TAKE-OFF MINIMUMS: **Rwys 5,10,23,28,** NA-Environmental.
NOTE: **Rwy 16,** tree 1655' from DER, 899' left of centerline, 51' AGL/1410' MSL. Tree 3236' from DER, 1130' right of centerline, 82' AGL/1441' MSL. **Rwy 34,** tree 3416' from DER, 1253' right of centerline, 100' AGL/1399' MSL.

GRANITE FALLS, MN
GRANITE FALLS MUNI/LENZEN-ROE MEML FLD (GDB)
ORIG 10126 (FAA)
NOTE: **Rwy 15,** trees beginning 1780' from DER, 94' left of centerline, up to 100' AGL/1149' MSL. **Rwy 33,** trees beginning 1196' from DER, right and left of centerline, up to 100' AGL/1149' MSL. Powerline 1242' from DER, 762' left of centerline, 80' AGL/1129' MSL. Train 1390' from DER, 149' left of centerline, 23' AGL/1162' MSL. Vehicle on road 1389' from DER, 156' left of centerline, up to 15' AGL/1154' MSL.

GREGORY, SD
GREGORY MUNI, FLYNN FIELD (9D1)
ORIG 97142 (FAA)
TAKE-OFF MINIMUMS: **Rwy 31,** 400-2 or std. with a min. climb of 210' per NM to 2600.

GWINNER, ND
GWINNER-ROGER MELROE FIELD (GWR)
ORIG 09183 (FAA)
TAKE-OFF MINIMUMS: **Rwys 6, 24,** NA-Environment. **Rwy 34,** Std. w/ min. climb of 216' per NM to 2000, or 900-2½ for climb in visual conditions.
DEPARTURE PROCEDURE: **Rwy 34,** for climb in visual conditions, cross Gwinner-Roger Melroe Field at or above 2000, before proceeding on course.
NOTE: **Rwy 16,** terrain beginning 15' from DER, 73' right of centerline, 1257' MSL. **Rwy 34,** road and vehicle 436' from DER, on centerline, 15' AGL/1286' MSL.

HAWLEY, MN
HAWLEY MUNI (04Y)
ORIG 07074 (FAA)
NOTE: **Rwy 34,** road 15' from departure end of runway, 421' left of centerline, 15' AGL/1224' MSL.

HETTINGER, ND
HETTINGER MUNI (HEI)
AMDT 2 10154 (FAA)
TAKE-OFF MINIMUMS: **Rwy 12,** 300-1 or std. with a min. climb of 324' per NM to 3000. **Rwys 17, 35,** NA-Environmental.
NOTE: **Rwy 30,** road plus vehicles beginning 63' from DER, crossing left to right, 15' AGL/2744' MSL. Trees beginning 4306' from DER, 17' right of centerline, 100' AGL/2819' MSL.

HIBBING, MN
RANGE RGNL (HIB)
AMDT 6 04218 (FAA)
DEPARTURE PROCEDURE: **Rwy 22,** climb via heading 227° to 2200 before turning right. **Rwy 31,** climb via heading 310° to 2200 before turning left.
NOTE: **Rwy 4,** antenna on pole, 361' from departure end of runway, 409' right of centerline, 1377' MSL. **Rwy 13,** obstacle light on pole, 1184' from departure end of runway, 636' left of centerline. Numerous trees beginning 1291' from departure end of runway, 745' left of centerline up to 1419' MSL. Trees 1497' from departure end of runway, 563' right of centerline, 1388' MSL. **Rwy 22,** multiple trees beginning 368' from departure end of runway, 170' right of centerline, up to 1416' MSL. Multiple trees beginning 413' from departure end of runway, 117' left of centerline, up to 1400' MSL. **Rwy 31,** light standard, 865' from departure end of runway, 595' right of centerline, 1381' MSL.

HILLSBORO, ND
HILLSBORO MUNI (3H4)
ORIG 97198 (FAA)
DEPARTURE PROCEDURE: **Rwys 16, 34,** climb runway heading to 2000 prior to turning westbound.

HINCKLEY, MN
FIELD OF DREAMS (04W)
ORIG 08045 (FAA)
NOTE: **Rwy 6,** Tree 82' from departure end of runway, 480' right of centerline, 100' AGL/1114' MSL. Tree 143' from departure end of runway, 161' left of centerline, 100' AGL/1114' MSL. **Rwy 24,** Tree 48' from departure end of runway, 165' left of centerline, 100' AGL/1124' MSL.

HOT SPRINGS, SD
HOT SPRINGS MUNI (HSR)
ORIG 97142 (FAA)
TAKE-OFF MINIMUMS: **Rwy 1,** 300-1 or std. with a min. climb of 360' per NM to 5000. **Rwy 19,** 300-2 or std. with a min. climb of 250' per NM to 5000.
DEPARTURE PROCEDURE: **Rwys 1,19,** climb runway heading to 5000 before proceeding westbound.

HURON, SD
HURON RGNL (HON)
AMDT 5 09239 (FAA)
NOTE: **Rwy 12,** trees and pole beginning 918' from DER, 525' left of centerline, up to 62' AGL/1341' MSL. Trees beginning 291' from DER, 234' right of centerline, up to 100' AGL/1389' MSL. **Rwy 17,** trees beginning 236' from DER, 307' left of centerline, up to 67' AGL/1346' MSL. Trees beginning 264' from DER, 262' right of centerline, 73' AGL/1352' MSL. **Rwy 30,** trees beginning 3428' from DER, 1378' left of centerline, up to 100' AGL/1394' MSL. **Rwy 35,** trees beginning 60' from DER, 104' left of centerline, up to 49' AGL/1328' MSL. Trees beginning 251' from DER, 97' right of centerline, 52' AGL/1331' MSL.

INTERNATIONAL FALLS, MN
FALLS INTL (INL)
AMDT 3 08101 (FAA)
NOTE: **Rwy 4,** Tree 392' from departure end of runway 311' left of centerline, 51' AGL/1231' MSL. **Rwy 13,** multiple trees beginning 1999' from departure end of runway, 773' left of centerline, up to 63' AGL/1233' MSL. Pole 1091, from departure end of runway, 703' right of centerline, 37' AGL/1207' MSL. Road 1005' from departure end of runway, 766' left of centerline, 15' AGL/1195' MSL. **Rwy 22,** Multiple trees beginning 433' from departure end of runway 273' left of centerline, up to 33' AGL/1213' MSL. Trees 1144' from departure end of runway 136' right of centerline, 28' AGL/1208' MSL. **Rwy 31,** Trees 968' from departue end of runway, 752' left of centerline, 56' AGL/1236' MSL.

JACKSON, MN
JACKSON MUNI (MJQ)
ORIG 08045 (FAA)
TAKE-OFF MINIMUMS: **Rwys 4,22,** NA-TURF.
DEPARTURE PROCEDURE: **Rwy 13,** Climb heading 134° to 1900 before turning right.
NOTES: **Rwy 13,** Trees beginning 1474' from departure end of runway, 556' left of centerline, up to 80' AGL/1539' MSL. Vehicle on road 258' from departure end of runway, 559' from centerline, 15' AGL/1459' MSL. **Rwy 31,** Vehicle on road 465' from departure end of runway, 618' left of centerline, 15' AGL/1446' MSL. Trees beginning 1616' from departure end of runway, 580' right of centerline, up to 80' AGL/1519' MSL. Trees beginning 1110' from departure end of runway, 429' left of centerline, up to 80' AGL/1509' MSL.

JAMESTOWN, ND
JAMESTOWN RGNL (JMS)
AMDT 1 07242 (FAA)
NOTE: **Rwy 22,** antenna and tank beginning 2960' from departure end of runway, 1007' left of centerline, up to 150' AGL/1631' MSL. **Rwy 31,** multiple trees beginning 2129' from departure end of runway 47' right of centerline, up to 60' AGL/1560' MSL.

KINDRED, ND
HAMRY FIELD (K74)
ORIG 10042 (FAA)
NOTE: **Rwy 29,** tree 991' from DER, 367' left of centerline, 38' AGL/982' MSL. Tree 1073' from DER, 221' left of centerline, 38' AGL/982' MSL.

LANGDON, ND
ROBERTSON FIELD (D55)
ORIG 10154 (FAA)
TAKE-OFF MINMUMS: **Rwys 8, 26,** NA - Environmental.
NOTE: **Rwy 14,** vehicles on road beginning 479' to 684' from DER, from 238' to 413' left of centerline, up to 15' AGL/1627' MSL. **Rwy 32,** windsock 13' from DER, 416' right of centerline, 16' AGL/1619' MSL. Fence 24' from DER, 301' left of centerline, 5' AGL/1608' MSL. Fence 199' from DER, 293' left of centerline, 5' AGL/1608' MSL. Trees beginning 485' from DER 203' right of centerline, up to 30' AGL/1628' MSL. Trees beginning 1912' from DER, from 241' to 418' left of centerline, up to 78' AGL/1677' MSL.

LITCHFIELD, MN
LITCHFIELD MUNI (LJF)
DEPARTURE PROCEDURE: **Rwys 13, 31,** climb to 1800 on runway heading before proceeding on course.

LITTLE FALLS, MN
LITTLE FALLS/MORRISON COUNTY
CHARLES A. LINDBERGH FIELD (LXL)
AMDT 3 96172 (FAA)
TAKE-OFF MINIMUMS: **Rwy 13,** 300-1 or std. with a min. climb of 250' per NM to 1500. **Rwy 36,** 600-1½ or std. with a min. climb of 345' per NM to 1700.
DEPARTURE PROCEDURE: **Rwy 31**, climb to 1700 before turning.

LONG PRAIRIE, MN
TODD FIELD (14Y)
ORIG 08157 (FAA)
NOTE: **Rwy 16,** tree 273' from departure end of runway, 310' right of centerline, 100' AGL/1436' MSL. **Rwy 34,** tree 70' from departure end of runway, 100' right of centerline, 100' AGL/1439' MSL. Tree 122' from departure end of runway, 105' left of centerline, 100' AGL/1436' MSL. Tree 18' from departure end of runway, 106' right of centerline, 100' AGL/1433' MSL.

LUVERNE, MN
QUENTIN AANENSON FIELD (LYV)
ORIG 10154 (FAA)
NOTE: **Rwy 18,** tree 813' from DER, 578' left of centerline, 50' AGL/1469' MSL. Road plus vehicle 685' from DER, 574' right of centerline, 15' AGL/1454' MSL. Terrain 20' from DER, on centerline, 1429' MSL. **Rwy 36,** transmission tower, 5752' from DER, 1036' right of centerline, 139' AGL/1581' MSL.

MANKATO, MN

MANKATO RGNL (MKT)
ORIG 09267 (FAA)

NOTE: **Rwy 4,** trees beginning 447' from DER, 408' right of centerline, up to 100' AGL/1078' MSL. Trees beginning 1996' from DER, 17' left of centerline, up to 100' AGL/1084' MSL. **Rwy 15,** trees beginning 1552' from DER, 719' left of centerline, up to 100' AGL/1088' MSL. **Rwy 22,** trees beginning 2370' from DER, 989' right of centerline, up to 100' AGL/1069' MSL. **Rwy 33,** trees beginning 2085' from DER, 780' right of centerline, up to 100' AGL/1077' MSL. Rising terrain 9' from DER, 65' right of centerline, up to 1029' MSL. Terrain beginning 82' from DER, 60' left of centerline, up to 1029' MSL.

MARSHALL, MN

SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)
AMDT 2 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 20,** Std. w/ min. climb of 270' per NM to 2000, or 1000-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 20,** for climb in visual conditions, cross Marshall Airport at or above 2000 MSL before proceeding on course.

NOTE: **Rwy 12,** Pole 706' from departure end of runway, 671' right of centerline, 60' AGL/1212' MSL, pole 1580' from departure end of runway, 732' left of centerline, 70' AGL/1225' MSL, antenna 1496' from departure end of runway, 620' right of centerline, 64' AGL/1219' MSL, pole 1185' from departure end of runway, 540' right of centerline, 55' AGL/1210' MSL, tree 3564' from departure end of runway, 400' right of centerline, 110' AGL/1269' MSL, tree 2135' from departure end of runway, 113' left of centerline, 77' AGL/1232' MSL. **Rwy 30,** Vehicle on road 1' from departure end of runway, 435' left of centerline, 24' AGL/1200' MSL.

MILBANK, SD

MILBANK MUNI (1D1)
ORIG 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 25,** Std. w/ a min. climb of 207' per NM to 1900, or 900-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 25,** For climb in visual conditions cross Milbank Muni airport at or abov e 1900 before proceeding on course.

NOTE: **Rwy 7,** trees beginning 1207' from departure end of runway, 387' left of centerline, up to 100' AGL/1219' MSL. Vehicle on road 829' from departure end of runway, 373' right of centerline, 15' AGL/1134' MSL. Building 322' from departure end of runway, 582' right of centerline, 25' AGL/1134' MSL. **Rwy 13,** trees beginning 1448' from departure end of runway, 394' right of centerline, up to 100' AGL/1219' MSL. Vehicle on road 218' from departure end of runway, 490' left of centerline, 15' AGL/1134' MSL. Building 78' from departure end of runway, 397' left of centerline, 25' AGL/1134' MSL. **Rwy 25,** tree 3584' from departure end of runway, 477' left of centerline, 100' AGL/1249' MSL. **Rwy 31,** tree 2992' from departure end of runway, 715' left of centerline, 100' AGL/1239' MSL.

MILLER, SD

MILLER MUNI (MKA)
ORIG 08269 (FAA)

NOTE: **Rwy 15,** vehicle on road 769' from departure end of runway, 642' right of centerline, 15' AGL/1599' MSL. Snow removal equipment 206' from departure end of runway, 475' right of centerline, 21' AGL/1594' MSL. Tree 3903' from departure end of runway, 998' left of centerline, 100' AGL/1684' MSL. **Rwy 33,** vehicle on road 450' from departure end of runway, 560' left of centerline, 15' AGL/1584' MSL. Tree 762' from departure end of runway, 628' left of centerline, 100' AGL/1669' MSL.

MINNEAPOLIS, MN

AIRLAKE (LVN)
ORIG 10154 (FAA)

NOTE: **Rwy 12,** ground 198' from DER, 533' right of centerline, 0' AGL/963' MSL. Tree and vehicle on road, beginning 422' from DER, 379' right of centerline, up to 15' AGL/978' MSL. Tree 1291' from DER, 506' left of centerline, 62' AGL/1002' MSL. **Rwy 30,** ground 104' from DER, 479' left of centerline, 0' AGL/965' MSL. Tree, pole, and antenna on building beginning 171' from DER, 259' right of centerline, up to 50' AGL/1000' MSL. Tree, railroad, and antenna on building 486' from DER, 268' left of centerline, up to 41' AGL/1001' MSL. Trees and a building beginning 821' from DER, 30' right of centerline, up to 49' AGL/1009' MSL.

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)
AMDT 5A 10126 (FAA)

TAKE-OFF MINIMUMS; **Rwy 9,** 300-1½ or std. w/ min. climb of 204' per NM to 1200, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1200' prior to DER. **Rwy 18,** 300-1 or std. w/ min. climb of 367' per NM to 1200.

DEPARTURE PROCEDURE: **Rwy 9,** climb heading 089° to 2200 before turning right. **Rwy 18,** climb heading 179° to 2600 before turning left. **Rwy 27,** climb heading 269° to 1700 before proceeding southeast bound.

Rwy 36, climb heading 359° to 1700 before proceeding southeast bound.

NOTE: **Rwy 9,** tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL. Trees 2248' from DER, 966' left of centerline, 100' AGL/1009' MSL. **Rwy 18,** aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL. Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL. Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL.

Rwy 27, multiple trees beginning 7' from DER, 235' right of centerline, up to 83' AGL/983' MSL. Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL. **Rwy 36,** multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL. Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

MINNEAPOLIS, MN (CON'T)

CRYSTAL (MIC)

AMDT 2 81050 (FAA)

TAKE-OFF MINIMUMS: **Rwys 14L,14R,32L,32R,** 300-1. **Rwys 24L,24R,** 300-1 or std. with a min. climb of 215' per NM to 1000. **Rwys 6L, 6R,** 300-1 or std. with a min. climb of 285' per NM to 1000.

DEPARTURE PROCEDURE: **Rwys 6L,6R,14L,14R,** eastbound departures (050°-130°) climb runway heading to 2800 before turning.

FLYING CLOUD (FCM)

AMDT 4 08157 (FAA)

NOTE: **Rwy 10L,** multiple antenna's on hangar's beginning 270' from departure end of runway, 330' left of centerline, up to 26' AGL/932' MSL. Tree 682' from departure end of runway, 668' right of centerline, 26' AGL/932' MSL. **Rwy 10R,** multiple obstruction light on poles beginning 287' from departure end of runway, 345' right of centerline, up to 36' AGL/939' MSL. Hangar 150' from departure end of runway, 422' right of centerline, 21' AGL/920' MSL. Antenna on building, 536' from departure end of runway, 263' right of centerline, 14' AGL/913' MSL. **Rwy 18,** multiple trees beginning 338' from departure end of runway, 166' left of centerline, up to 62' AGL/961' MSL. Obstruction light on fence 176' from departure end of runway, 127' left of centerline, 10' AGL/910' MSL. Vehicle and road 198' from departure end of runway, 196' left of centerline, 15' AGL/918' MSL. Floodlight 148' from departure end of runway, 374' right of centerline, 38' AGL/938' MSL. Obstruction light on hangar 282' from departure end of runway, 317' right of centerline, 37' AGL/937' MSL. **Rwy 28R,** Hangar 259' from departure end of runway, 355' right of centerline, 18' AGL/931' MSL. **Rwy 36,** wind vane 923' from departure end of runway, 404' left of centerline, 61' AGL/960' MSL. Vent on building 943' from departure end of runway, 295' left of centerline, 44' AGL/943' MSL. Pole 714' from departure end of runway, 351' left of centerline, 33' AGL/932' MSL. Multiple trees beginning 504' from departure end of runway, 324' right of centerline, up to 67' AGL/966' MSL.

MINNEAPOLIS, MN (CON'T)

MINNEAPOLIS-ST. PAUL INTL (WOLD CHAMBERLAIN) (MSP)

AMDT 11 07130 (FAA)

TAKEOFF MINIMUMS: **Rwy 35,** std. with a min. climb of 219' per NM to 2100.

DEPARTURE PROCEDURE: **Rwy 4,** climb heading 043° to 2100 before turning left. **Rwy 30L,** climb heading 299° to 2100 before turning right. **Rwy 30R,** climb heading 299° to 2100 before turning right. **Rwy 35,** climb via heading 348° to 2100 before turning left.

NOTE: **Rwy 4,** multiple trees beginning 800' from departure end of runway, 264' left of centerline, up to 75' AGL/921' MSL. Rod on building 2528' from departure end of runway, 1175' left of centerline, 78' AGL/922' MSL. Fence 803' from departure end of runway, 585' left of centerline, 15' AGL/860' MSL. Antenna on OL building 456' from departure end of runway, 319' left of centerline, 13' AGL/850' MSL. Light poles 1932' from departure end of runway, 718' left of centerline, 45' AGL/885' MSL. Stack 4535' from departure end of runway, 481' left of centerline, 139' AGL/949' MSL. **Rwy 12R,** multiple trees beginning 1477' from departure end of runway, 407' left of centerline, up to 86' AGL/851' MSL. Multiple trees beginning 1426' from departure end of runway, 124' right of centerline, up to 111' AGL/847' MSL. Light pole 1408' from departure end of runway, 746' right of centerline, 85' AGL/843' MSL. Radar RFLTR 983' from departure end of runway, 32' left of centerline, 15' AGL/829' MSL. Pipe on building, 826' from departure end of runway, 576' left of centerline, 10' AGL/825' MSL. Obstruction light on localizer 766' from departure end of runway, on centerline, 7' AGL/821' MSL. **Rwy 17,** antenna 1272' from departure end of runway, 562' right of centerline, 57' AGL/891' MSL. Pole 409' from departure end of runway, 530' right of centerline, 29' AGL/866' MSL. WDI on building 2619' from departure end of runway, 881' left of centerline, 97' AGL/918' MSL. Building 2619' from departure end of runway, 859' left of centerline, 84' AGL/905' MSL. Light 1176' from departure end of runway, 291' right of centerline, 11' AGL/875' MSL. Tree 2619' from departure end of runway, on centerline, 79' AGL/900' MSL. **Rwy 22,** tree 2906' from departure end of runway, 833' right of centerline, 94' AGL/934' MSL. Hopper 1717' from departure end of runway, 456' left of centerline, 48' AGL/888' MSL. **Rwy 30L,** multiple trees beginning 1113' from departure end of runway, 701' left of centerline, up to 80' AGL/919' MSL. Tree 1230' from departure end of runway, 633' right of centerline, 30' AGL/877' MSL. Ground 28' from departure end of runway, 490' right of centerline, 0' AGL/844' MSL. **Rwy 30R,** building 1056' from departure end of runway, 198' left of centerline, 13' AGL/853' MSL. Multiple trees beginning 3010' from departure end of runway, 334' left of centerline, up to 94' AGL/940' MSL. Light pole 1849' from departure end of runway, 698' right of centerline, 17' AGL/871' MSL. Fence 1327' from departure end of runway, 667' right of centerline, 8' AGL/857' MSL. Tree 3703' from departure end of runway, 350' right of centerline, 67' AGL/914' MSL. Rod on pole 3143' from departure end of runway, 47' right of centerline, 38' AGL/898' MSL. **Rwy 35,** tree 175' from departure end of runway, 398' right of centerline, 73' AGL/883' MSL. Multiple trees beginning 1989' from departure end of runway, 351' left of centerline, up to 65' AGL/902' MSL. Multiple buildings beginning 5.45 NM from departure end of runway, 1787' left of centerline, up to 811' AGL/1743' MSL.

MINOT, ND
MINOT INTL (MOT)
AMDT 3 06103 (FAA)
TAKE-OFF MINIMUMS: **Rwy 26,** 300-1½ or std. with a min. climb of 219' per NM to 2000.
DEPARTURE PROCEDURE: **Rwy 13,** climb via heading 128° to 2200 before turning right. **Rwy 26,** climb via heading 260° to 2300 before turning left.
NOTE: **Rwy 8,** tree 1801' from departure end of runway, 292' left of centerline, 56' AGL/1714' MSL. Tree 1459' from departure end of runway, 528' left of centerline, 47' AGL/1705' MSL. **Rwy 26,** tree 1750' from departure end of runway, 618' right of centerline, 71' AGL/1786' MSL. Tree 1829' from departure end of runway, 376' left of centerline, 65' AGL/1780' MSL. Light pole 1110' from departure end of runway, 610' left of centerline, 44' AGL/1759' MSL. Tank 1.1 NM from departure end of runway, 1810' right of centerline, 184' AGL/1899' MSL. Tree 1782' from departure end of runway, 273' right of centerline, 49' AGL/1764' MSL. Light pole 1294' from departure end of runway, 452' right of centerline, 29' AGL/1751' MSL. Tree 2019' from departure end of runway, 393' right of centerline, 54' AGL/1769' MSL. Building 1431' from departure end of runway, 301' right of centerline, 38' AGL/1753' MSL. Light pole 1418' from departure end of runway, 23' right of centerline, 36' AGL/1751' MSL.

MITCHELL, SD
MITCHELL MUNI (MHE)
AMDT 1 86240 (FAA)
DEPARTURE PROCEDURE: **Rwys 12, 17,** climb to 1800 before turning.

MOBRIDGE, SD
MOBRIDGE MUNI(MBG)
ORIG 88154 (FAA)
TAKE-OFF MINIMUMS: **RWY 35,** 300-1.
DEPARTURE PROCEDURE: **Rwys 12, 17, 30, 35,** climb runway heading to 2500 before turning on course.

MONTEVIDEO, MN
MONTEVIDEO-CHIPPEWA COUNTY (MVE)
TAKE-OFF MINIMUMS: **Rwy 21,** 400-1½.
DEPARTURE PROCEDURE: **Rwy 14,** climb runway heading to 1500 before turning.

MOOSE LAKE, MN
MOOSE LAKE CARLTON COUNTY (MZH)
ORIG 94006 (FAA)
TAKE-OFF MINIMUMS: **Rwys 4, 22,** 300-1.

MORRIS, MN
MORRIS MUNI-CHARLIE SCHMIDT FLD (MOX)
ORIG 08045 (FAA)
TAKE-OFF MINIMUMS: **Rwys 4, 22,** NA-Environmental.
NOTE: **Rwy 32,** Trees 2888' from departure end of runway, 1125' left of centerline, 100' AGL/1209' MSL.

OAKES, ND
OAKES MUNI (2D5)
ORIG 97142 (FAA)
TAKE-OFF MINIMUMS: **Rwy 30,** 300-1 or std. with a min. climb of 260' per NM to 1700.

OLIVIA, MN
OLIVIA RGNL (OVL)
AMDT 1 86044 (FAA)
TAKE-OFF MINIMUMS: **Rwy 11,** 300-1.

ORR, MN
ORR RGNL (ORB)
AMDT 1 80136 (FAA)
TAKE-OFF MINIMUMS: **Rwy 13,** 500-2 or std. with a min. climb of 260' per NM to 1900.

ORTONVILLE, MN
ORTONVILLE MUNI-MARTINSON FIELD (VVV)
ORIG 81274 (FAA)
TAKE-OFF MINIMUMS: **Rwy 16,** 300-1 or std. with a min. climb of 210' per NM to 1300.

OWATONNA, MN
OWATONNA DEGNER RGNL (OWA)
AMDT 2 97030 (FAA)
DEPARTURE PROCEDURE: **Rwy 12,** climb runway heading to 1500 before turning on course.

PEMBINA, ND
PEMBINA MUNI (PMB)
ORIG 85325 (FAA)
DEPARTURE PROCEDURE: **Rwy 33,** climb runway heading 3200 before turning left.

PERHAM, MN
PERHAM MUNI (16D)
ORIG 98113 (FAA)
TAKE-OFF MINIMUMS: **Rwy 12,** 500-2 or std. with a min. climb of 210' per NM to 2000. **Rwy 30,** 400-1 or std. with a min. climb of 270' per NM to 1800.
DEPARTURE PROCEDURE: **Rwy 12,** climb runway heading to 2000 before proceeding on course. **Rwy 30,** climb runway heading to 1800 before proceeding on course.

PIERRE, SD
PIERRE RGNL (PIR)
AMDT 2 85115 (FAA)
TAKE-OFF MINIMUMS: **Rwy 25,** 300-1.

PINE RIDGE, SD
PINE RIDGE (IEN)
ORIG 97226 (FAA)
TAKE-OFF MINIMUMS: **Rwy 12,** 300-1 or std. with a min. climb of 350' per NM to 3600. **Rwy 24,** 300-1 or std. with a min. climb of 220' per NM to 3500. **Rwy 30,** 300-1 or std. with a min. climb of 300' per NM to 3600.

PIPESTONE, MN
PIPESTONE MUNI (PQN)
ORIG 08045 (FAA)
TAKE-OFF MINIMUMS: **Rwys 9, 27,** NA-Environmental.
NOTE: **Rwy 18,** Trees beginning 3811' from departure end of runway, 854' right of centerline, up to 100' AGL/1859' MSL.

PRESTON, MN
FILLMORE COUNTY (FKA)
ORIG 98113 (FAA)
TAKE-OFF MINIMUMS: **Rwys 11,29,** 300-1.

PRINCETON, MN
PRINCETON MUNI (PNM)
AMDT 1 05132 (FAA)
NOTE: **Rwy 15,** trees 982' from departure end of runway, 335' right of centerline, 50' AGL/1029' MSL. Trees 1449' from departure end of runway, 387' left of centerline, 50' AGL/1029' MSL. **Rwy 33,** barn 1159' from departure end of runway, 780' right of centerline, 50' AGL/1139' MSL, multiple trees, terrain, and road beginning 36' from departure end of runway, 84' right of centerline, up to 50' AGL/1045' MSL.

RAPID CITY, SD
RAPID CITY RGNL (RAP)
AMDT 6 07130 (FAA)
DEPARTURE PROCEDURE: **Rwy 5,** climb on heading between 255° clockwise to 210° from departure end of runway, or min. climb of 240' per NM to 8800 for all other courses. **Rwy 14,** climb on heading between 325° clockwise to 210° from departure end of runway, or min. climb of 245' per NM to 8900 for all other courses. **Rwy 23,** climb on heading between 210° counter clockwise to 055° from departure end of runway, or min. climb of 268' per NM to 8900 for all other courses. **Rwy 32,** climb on heading between 255° clockwise to 140° from departure end of runway, or min. climb of 242' per NM to 8800 for all other courses.
NOTE: **Rwy 5,** fence 133' from departure end of runway, 249' left of centerline, 10' AGL/3215' MSL. **Rwy 23,** hangar 201' from departure end of runway, 299' left of centerline, 24' AGL/3193' MSL. Fence 334' from departure end of runway, 256' right of centerline, 10' AGL/3184' MSL. **Rwy 32,** obstruction light 662' from departure end of runway, 243' left of centerline, 54' AGL/3213' MSL. Fence 1002' from departure end of runway, 751' right of centerline, 10' AGL/3233' MSL. Tower 1.9 NM from departure end of runway, 3503' right of centerline, 152' AGL/3520' MSL.

RAY S. MILLER AAF (KRYM)
CAMP RIPLEY, MN . . . . . AMDT 2, 09155
TAKE-OFF OBSTACLES: **Rwy 13**, Terrain 1270' MSL, 73' from DER, 8' left and right of centerline. Vehicle 15' AGL/1180' MSL, 765' from DER, 638' left of centerline. **Rwy 31,** Terrain 1273' MSL, 54' from DER, 9' left and right of centerline. Trees 64' AGL/1282' MSL, 798' from DER, 325' left and right of centerline.

RED WING, MN
RED WING RGNL (RGK)
AMDT 1 01137 (FAA)
DEPARTURE PROCEDURE: **Rwy 9,** 700-4 or std. with a min. climb of 270' per NM to 1700.

REDWOOD FALLS, MN
REDWOOD FALLS MUNI (RWF)
ORIG 09071 (FAA)
TAKE-OFF MINIMUMS: **Rwys 5, 23,** NA-Environmental.
NOTE: **Rwy 12,** numerous buildings beginning 388' from DER, 376' right of centerline, up to 13' AGL/1052' MSL. Numerous fences beginning 6' from DER, 329' right of centerline, up to 13' AGL/1052' MSL. Tree 62' from DER, 444' left of centerline, 11' AGL/1040' MSL. **Rwy 30,** multiple trees beginning 865' from DER, 401' right of centerline, up to 100' AGL/1119' MSL. Vehicle on road 128' from DER, 306' right of centerline, 15' AGL/1027' MSL.

ROCHESTER, MN
ROCHESTER INTL (RST)
ORIG 09015 (FAA)
NOTE: **Rwy 2,** road 73' from departure end of runway, 385' right of centerline, 10' AGL/1292' MSL. Tree 4377' from departure end of runway, 1132' right of centerline, 100' AGL/1399' MSL. Road 268' from departure end of runway, 366' right of centerline, 10' AGL/1290' MSL. **Rwy 13,** tree 1498' from departure end of runway, 840' right of centerline, 44' AGL/1348' MSL. **Rwy 20,** pole 259' from departure end of runway, 407' right of centerilne, 23' AGL/1338' MSL. Roads beginning 1' from departure end of runway, 231' right of centerline, up to 10' AGL/1327' MSL. **Rwy 31,** tree 4760' from departure end of runway, 1103' left of centerline, 100' AGL/1389' MSL.

ROSEAU, MN
ROSEAU MUNI-RUDY BILLBERG FIELD (ROX)
ORIG 07242 (FAA)
NOTE: **Rwy 16,** building 258' from departure end of runway, 505' right of centerline, 24' AGL/1078' MSL. Tree 1582' from departure end of runway, 337' left of centerline, 47' AGL/1101' MSL. **Rwy 34,** truck on road 41' from departure end of runway, 511' left of centerline, 15' AGL/1069' MSL.

RUSHFORD, MN
RUSHFORD MUNI (55Y)
AMDT 1 96228 (FAA)
TAKE-OFF MINIMUMS: **Rwy 34,** 300-1 or std. with a min. climb of 300' per NM to 1500.
DEPARTURE PROCEDURE: **Rwy 16,** climb runway heading to 1700 before turning eastbound.

ST. CLOUD, MN

ST. CLOUD RGNL (STC)
ORIG 09239 (FAA)

TAKE-OFF MINIMUMS: **Rwy 5,** 300-1¼ or std. w/ min. climb of 201' per NM to 1300 or alternatively, with standard take-off minimums and a normal 200'/NM climb gradient, take-off must occur no later than 1100' prior to DER.

NOTE: **Rwy 5,** tower 6201' from DER, 1416' left of centerline, 149' AGL/1179' MSL. Multiple trees beginning 17' from DER, 373' right of centerline, up to 59' AGL/1081' MSL. Multiple trees beginning 1752' from DER, 56' left of centerline, up to 80' AGL/1102' MSL. **Rwy 13,** tree 1654' from DER, 884' right of centerline, 61' AGL/1078' MSL. Tree 1265' from DER, 794' left of centerline, 42' AGL/1059' MSL. **Rwy 23,** trees 2109' from DER, 29' right of centerline, up to 61' AGL/1082' MSL. Trees 1725' from DER, 93' left of centerline, up to 55' AGL/1076' MSL. Fence 74' from DER, 216' left of centerline, 2' AGL, 1023' MSL. **Rwy 31,** terrain beginning 29' from DER, 50' right of centerline, up to 1083' MSL. Terrain beginning 107' from DER, 7' left of centerline, up to 1060' MSL.

ST. JAMES, MN

ST. JAMES MUNI (JYG)
ORIG 94342 (FAA)

DEPARTURE PROCEDURE: **Rwy 15,** climb to 1900 before turning eastbound.

ST. PAUL MN

LAKE ELMO (21D)
ORIG 80318 (FAA)

TAKE-OFF MINIMUMS: **Rwy 22,** 300-1 or std. with a min. climb of 225' per NM to 1100.

ST. PAUL DOWNTOWN HOLMAN FIELD (STP)
AMDT 7 08157 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9,** std. w/ min. climb of 346' per NM to 1500. **Rwy 13,** std. w/ min. climb of 266' per NM to 1500. **Rwy 14,** std. w/ min. climb of 216' per NM to 1500. **Rwy 27,** std. w/ min. climb of 436' per NM to 1500. **Rwy 31**, NA - obstacles. **Rwy 32,** std. w/ min. climb of 340' per NM to 3000.

DEPARTURE PROCEDURE: **Rwy 9,** climb heading 088° to 1500 before proceeding on course. **Rwy 13,** climb heading 125° to 1500 before proceeding on course.

Rwy 14, climb heading 143° to 1500 before proceeding on course. **Rwy 27,** climb heading 268° to 1700 before proceeding on course. **Rwy 32,** climb heading 323° to 1300 before proceeding on course.

NOTE: **Rwy 9,** multiple trees beginning 1265' from departure end of runway, 167' right of centerline, up to 75' AGL/1055' MSL. Multiple trees beginning 1.1 NM from departure end of runway, 124' left of centerline, up to 100' AGL/1099' MSL. Obstruction light tank 1571' from departure end of runway, 771' right of centerline, 50' AGL/811' MSL. Mobile crane 1163' from departure end of runway, 123' left of centerline, 50' AGL/ 758' MSL.

ST. PAUL DOWNTOWN HOLMAN FIELD (STP) (CON'T)

Rwy 13, Obstruction light stack 2695' from departure end of runway, 842' right of centerline, 50' AGL/820' MSL. Tree 1563' from departure end of runway, 25' right of centerline, 61' AGL/748' MSL. Multiple trees beginning 1004' from departure end of runway, 607' left of centerline, 50' AGL/767' MSL. Tower 1,725' from departure end of runway, 930' left of centerline, 47' AGL/753' MSL. Vent on building 3029' from departure end of runway, 629' right of centerline, 10' AGL/783' MSL. Multiple bushes beginning 194' from departure end of runway 88' left of centerline, 7' AGL/712' MSL. Stack 1,879' from departure end of runway, 25' left of centerline, 51' AGL/751' MSL. **Rwy 14,** multiple trees beginning 805' from departure end of runway, 2' right of centerline, up to 112' AGL/811' MSL. Multiple trees beginning 1205' from departure end of runway, 64' left of centerline, up to 80' AGL/770' MSL. Poles 2810' from departure end of runway 715' right of centerline, 91' AGL/778' MSL. **Rwy 27,** multiple trees beginning 803' from departure end of runway, 122' left of centerline, up to 100' AGL/994' MSL. Tree 783' from departure end of runway, 105' right of centerline, 25' AGL/725' MSL. Obstruction light antenna 996' from departure end of runway, 304' right of centerline, 67' AGL/ 767' MSL. Light pole 1328' from departure end of runway, 222' left of centerline, 50' AGL/747' MSL. Building 2049' from departure end of runway, 837' right of centerline, 57' AGL/761' MSL. Flagpole 2333' from departure end of runway, 199' left of centerline, 78' AGL/778' MSL. Stack 1.8 NM from departure end of runway, 635' left of centerline, 569' AGL/1279' MSL. **Rwy 32,** road and vehicle 211' from departure end of runway, 482' left of centerline, 17' AGL/717' MSL. Railroad beginning 369' from departure end of runway, 329' left of centerline, up to 23' AGL/727' MSL. Pipe on DME 383' from departure end of runway, 269' right of centerline, 17' AGL/722' MSL. Tree 1152' from departure end of runway, 209' left of centerline, 44' AGL/744' MSL. Tree 1685' from departure end of runway, 277' right of centerline, 75' AGL/770' MSL. Sign 5668' from departure end of runway, 1924' left of centerline, 86' AGL/874' MSL. Trees 5614' from departure end of runway, 1796' right of centerline, 100' AGL/939' MSL. Building 5779' from departure end of runway, 1733' right of centerline, 72' AGL/910' MSL. Pole 1.0 NM from departure end of runway, 1835' right of centerline, 157' AGL/973' MSL. Building 1.1 NM from departure end of runway, 2170' left of centerline, 122' AGL/886' MSL. Multiple buildings beginning 1.1 NM from departure end of runway, 378' left of centerline, up to 142' AGL/918' MSL

SILVER BAY, MN

SILVER BAY MUNI (BFW)
ORIG 93035 (FAA)

TAKE-OFF MINIMUMS: **Rwys 7, 25,** 300-1.

SIOUX FALLS, SD
JOE FOSS FIELD (FSD)
AMDT 7 07242 (FAA)

TAKE-OFF MINIMUMS: **Rwy 15,** 200-1 or std. w/ min. climb of 404' per NM to 1700. **Rwy 33,** 200-1¼ or std. w/ min. climb of 343' per NM to1700.

DEPARTURE PROCEDURE: **Rwy 3,** climb heading 030° to 2300 before turning eastbound. **Rwy 9,** climb heading 098° to 2000, then left turn direct FSD VORTAC. **Rwy 15,** climb heading 150° to 2000, then right turn direct FSD VORTAC. **Rwy 21,** climb heading 210° to 2200 before turning eastbound. **Rwy 27,** climb heading 278° to 2100 before turning eastbound. **Rwy 33,** climb heading 330° to 2200 before turning eastbound.

NOTE: **Rwy 9,** antenna 2238' from departure end of runway, 919' right of centerline, 87' AGL/1506' MSL. Pole 1256' from departure end of runway, 23' left of centerline, 43' AGL/1464' MSL. Windsock 331' from departure end of runway, 582' right of centerline, 14' AGL/1433' MSL. **Rwy 15,** antenna 3056' from departure end of runway, 983' left of centerline 117' AGL/1576' MSL. Multiple trees beginning 1211' from departure end of runway, 471' left of centerline, up to 38' AGL/1477' MSL. Tower 3102' from departure end of runway, 972' left of centerline, 61' AGL/1520' MSL. Trees and pole beginning 1746' from departure end of runway, 316' right of centerline, up to 87' AGL/1516' MSL. **Rwy 21,** multiple trees beginning 428' from departure end of runway, 522' right of centerline, up to 75' AGL/1497' MSL. **Rwy 27,** multiple trees beginning 2528' from departure end of runway, 1027' left of centerline, up to 100' AGL/1509' MSL. **Rwy 33,** 2 lighted radio towers 3639' from departure end of runway, 894' left of centerline, 88' AGL/1585' MSL, multiple trees beginning 5370' from departure end of runway, 891' left of centerline, up to 175' AGL/1603' MSL, pole 5724' from departure end of runway, 1701' left of centerline, 45' AGL/1594' MSL.

SPEARFISH, SD
BLACK HILLS-CLYDE ICE FIELD (SPF)

TAKE-OFF MINIMUMS: **Rwys 3, 8, 21, 35,** 700-2 (NA at night.). **Rwy 13,** 900-2 or std. with a min. climb of 300' per NM to 5400. **Rwy 17,** NA. **Rwys 26, 31,** 700-2 or std. with a min. climb of 370' per NM to 4700.

DEPARTURE PROCEDURE: **Rwys 3, 8,** turn left. Climb to 6500, intercept the 046° bearing outbound from SPF NDB. Thence... **Rwy 13,** climb runway heading to 4300, then climbing left turn to 6500 via heading 360° to intercept the 046° bearing outbound from SPF NDB. Thence... **Rwys 21, 35,** turn right. Climb to 6500 intercept the 046° bearing outbound from SPF NDB. Thence... **Rwy 26,** climbing right turn to 6500 via heading 330°, intercept the 297° bearing outbound from SPF NDB. Thence... **Rwy 31,** after take-off, intercept 297° bearing outbound from SPF NDB. Climb to 6500. Thence... THENCE...Continue climb to enroute MEA's before proceeding on course.

STAPLES, MN
STAPLES MUNI (SAZ)
AMDT 2 87211 (FAA)

TAKE-OFF MINIMUMS: **Rwy 14,** 400-2.

STURGIS, SD
STURGIS MUNI (49B)
ORIG 96284 (FAA)

DEPARTURE PROCEDURE: **Rwy 11,** climb runway heading to 6000, then direct RAP VORTAC. **Rwy 29,** climb runway heading to 5000, then climbing right turn to 6000 direct RAP VORTAC.

THIEF RIVER FALLS, MN
THIEF RIVER FALLS RGNL (TVF)
ORIG 09071 (FAA)

NOTE: **Rwy 3,** trees beginning 3058' from DER, 678' right of centerline, up to 100' AGL/1229' MSL. **Rwy 13,** trees beginning 565' from DER, 372' left of centerline, up to 100' AGL/1214' MSL. Trees beginning 1337' from DER, 531' right of centerline, up to 100' AGL/1209' MSL. **Rwy 21,** trees beginning 214' from DER, 544' right of centerline, up to 100' AGL/1204' MSL. Trees beginning 2185' from DER, 33' left of centerline, up to 100' AGL/1209' MSL. **Rwy 31,** trees beginning 126' from DER, 410' right of centerline, up to 100' AGL/1214' MSL. Trees beginning 199' from DER, 413' left of centerline, up to 100' AGL/1209' MSL. Trees beginning 1204' from DER, 449' right of centerline, up to 100' AGL/1199' MSL. Trees beginning 1579' from DER, 495' left of centerline, up to 100' AGL/1214' MSL.

TIOGA, ND
TIOGA MUNI (D60)
ORIG 09239 (FAA)

TAKE-OFF MINIMUMS: **Rwys 3, 21,** NA-Environmental.

NOTE: **Rwy 12,** vehicle on road 1243' from DER, 78' left of centerline, 15' AGL/2304' MSL. Vehicle on road, tree and pole beginning 618' from DER, 50' right of centerline, up to 100' AGL/2419' MSL. Ground 21' from DER, 481' right of centerline, 2272' MSL. **Rwy 30,** vehicle on road 1' from DER, 144' left of centerline, 15' AGL/2256' MSL.

TOWER, MN
TOWER MUNI (12D)
ORIG 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwy 8,** NA - Obstacles.

NOTE: **Rwy 26,** tree 2315' from DER, 700' right of centerline, 100' AGL/1479' MSL.

VALLEY CITY, ND
BARNES COUNTY MUNI (6D8)
ORIG 10098 (FAA)

NOTE: **Rwy 13,** vehicle on road, 111' from DER, 356' right of centerline, 15' AGL/1396' MSL. Trees beginning 644' from DER, 242' right of centerline, up to 40' AGL/1421' MSL. **Rwy 31,** terrain beginning 32' from DER, 20' right of centerline, up to 1424' MSL. Vehicle on road 38' from DER, 285' right of centerline, 15' AGL/1418' MSL. Fence 71' from DER, 292' left of centerline, 4' AGL/1407' MSL. Terrain beginning 120' from DER, 125' left of centerline, up to 1447' MSL. Fence 198' from DER, 299' right of centerline, 4' AGL/1408' MSL. Trees beginning 365' from DER, 10' left of centerline, up to 40' AGL/1457' MSL. Tree 545' from DER, 607' right of centerline, 16' AGL/1436' MSL.

VERMILLION, SD
HAROLD DAVIDSON FIELD (VMR)
AMDT 1 09239 (FAA)
NOTE: **Rwy 12,** road 1' from DER, 200' right of centerline, up to 15' AGL/1156' MSL. Multiple trees beginning 541' from DER, 366' right of centerline, up to 62' AGL/1202' MSL. **Rwy 30,** road 79' from DER 342' left of centerline 15' AGL/1155' MSL. Road 200' from DER, 450' right of centerline, 15' AGL/1160' MSL. Fence 199' from DER, 347' left of centerline, 6' AGL/1150' MSL.

WAHPETON, ND
HARRY STERN (BWP)
ORIG 93259 (FAA)
TAKE-OFF MINIMUMS: **Rwy 3**, 300-1.

WARREN, MN
WARREN MUNI (D37)
ORIG 02108 (FAA)
DEPARTURE PROCEDURE: **Rwy 30,** climb runway heading to 1400 before turning on course.

WARROAD, MN
WARROAD INTL MEMORIAL (RRT)
ORIG 08101 (FAA)
TAKE-OFF MINIMUMS: **Rwys 4, 22,** NA-Environmental.

WASECA, MN
WASECA MUNI (ACQ)
ORIG 09015 (FAA)
NOTE: **Rwy 15,** tree 560' from departure end of runway, 560' right of centerline, 100' AGL/1239' MSL. Terrain beginning 172' from departure end of runway, on centerline, up to 1149' MSL. **Rwy 33,** tree 5042' from departure end of runway, 1533' right of centerline, 100' AGL/1259' MSL.

WATERTOWN, SD
WATERTOWN RGNL (ATY)
ORIG 07242 (FAA)
NOTE: **Rwy 12,** tree 2015' from departure end of runway, 328' right of centerline, 100' AGL/1783' MSL. **Rwy 30,** trees 2149' from departure end of runway, 10' right of centerline, 51' AGL/1810' MSL. Tree 2200' from departure end of runway, 441' left of centerline, 70' AGL/1810' MSL. Tree 2082' from departure end of runway, 121' right of centerline, 55' AGL/1806' MSL.

WATFORD CITY, ND
WATFORD CITY MUNI (S25)
AMDT 1 10154 (FAA)
TAKE-OFF MINIMUMS: **Rwy 12,** 400-1¼ or std. with a min. climb of 462' per NM to 2600. **Rwys 18, 36,** NA-Environmental.
NOTE: **Rwy 12,** tree 5528' from DER, 1819' right of centerline, up to 100' AGL/2439' MSL. Vehicle on road, trees, and terrain beginning 186' from DER, 62' right of centerline, up to 100' AGL/2258' MSL. Vehicle on road, fence, and terrain beginning 90' from DER, 43' left of centerline, up to 27' AGL/2167' MSL.
Rwy 30, trees and buildings beginning 672' from DER, 119' right of centerline, up to 41' AGL/2101' MSL. Vehicle on road, light and trees beginning 199' from DER, 128' left of centerline, up to 59' AGL/2119' MSL.

WHEATON, MN
WHEATON MUNI (ETH)
AMDT 1 92177 (FAA)
TAKE-OFF MINIMUMS: **Rwy 16,** 300-1. **Rwys 4, 22,** NA.

WILLISTON, ND
SLOULIN FIELD INTL (ISN)
AMDT 3 00251 (FAA)
TAKE-OFF MINIMUMS: **Rwy 29,** 300-1or std. with a min. climb of 270' per NM to 2300.
DEPARTURE PROCEDURE: **Rwy 20,** climb runway heading to 2300 before turning westbound.

WILLMAR, MN
WILLMAR MUNI-JOHN L. RICE FIELD (BDH)
ORIG 06327 (FAA)
NOTE: **Rwy 31,** tree 1338' from departure end of runway, 740' left of centerline, 67' AGL/1193' MSL.

WINNER, SD
WINNER RGNL (ICR)
AMDT 3 09127 (FAA)
TAKE-OFF MINIMUMS: **Rwys 3, 21,** NA-Environmental.

WINONA, MN
WINONA MUNI-MAX CONRAD FIELD (ONA)
AMDT 3 96228 (FAA)
TAKE-OFF MINIMUMS: **Rwy 12,** 300-1 or std. with a min. climb of 320' per NM to 800. **Rwy 17,** 600-1 or std. with a min. climb of 500' per NM to 1300. **Rwy 30,** 500-1 or std. with a min. climb of 500' per NM to 1200. **Rwy 35,** 700-1 or std. with a min. climb of 390' per NM to 1500.
DEPARTURE PROCEDURE: **Rwy 12,** climb to 1900 via ONA R-110 before turning. **Rwys 17, 30, 35,** climb runway heading to 1900 before turning.

WORTHINGTON, MN
WORTHINGTON MUNI (OTG)
AMDT 2 88154 (FAA)
TAKE-OFF MINIMUMS: **Rwy 17,** 300-1.
DEPARTURE PROCEDURE: **Rwys 11, 17, 29, 35,** when weather is below 800-1 climb runway heading to 2400 before turning.

YANKTON, SD
CHAN GURNEY MUNI (YKN)
AMDT 2 85003 (FAA)
TAKE-OFF MINIMUMS: **Rwy 31,** 300-1.
DEPARTURE PROCEDURE: **Rwys 1, 13, 19, 31,** climb runway heading to 2400 before turning.

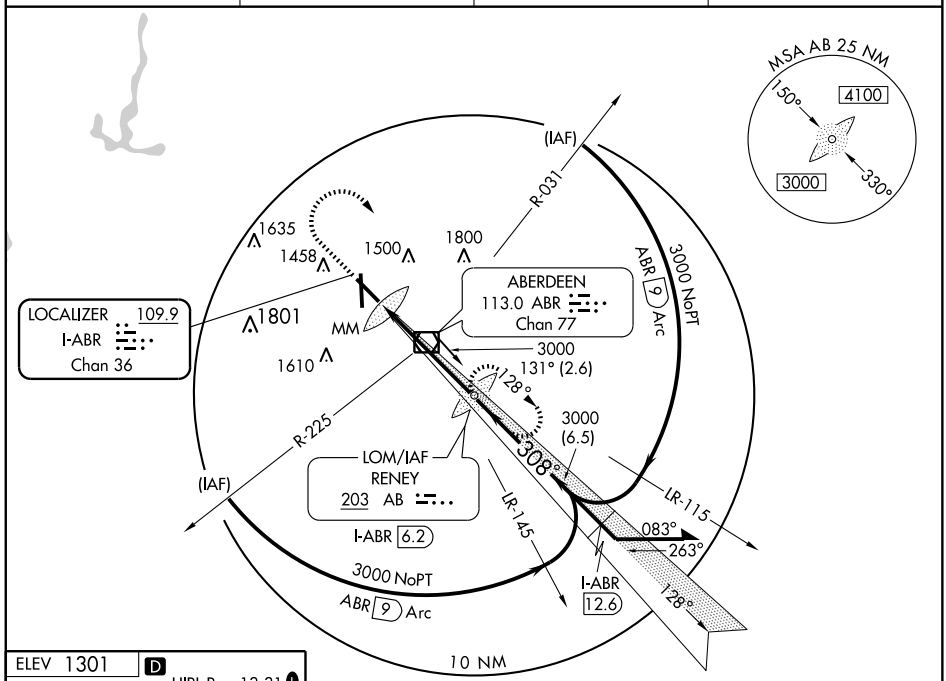
LOC/DME I-ABR 109.9 Chan 36	APP CRS 308°	Rwy ldg 6901 TDZE 1300 Apt Elev 1301

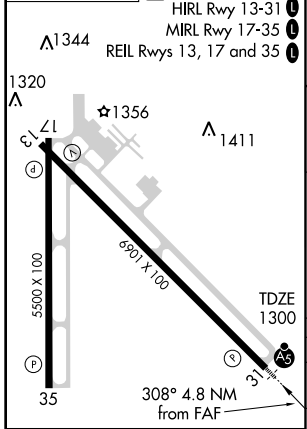
ILS RWY 31
ABERDEEN RGNL (ABR)

MALSR

MISSED APPROACH: Climb to 3000 then right turn direct RENEY LOM and hold.

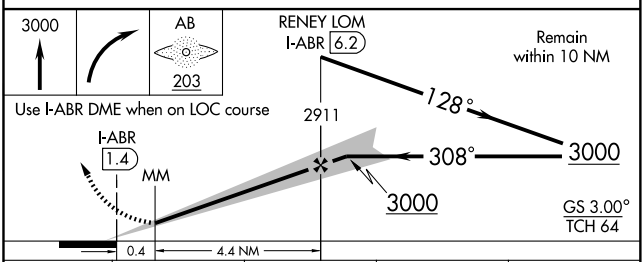
ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95





FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 31	1500-½ 200 (200-½)			
S-LOC 31	1660-½ 360 (400-½)			1660-¾ 360 (400-¾)
CIRCLING	1760-1 459 (500-1)		1760-1½ 459 (500-1½)	1860-2 559 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

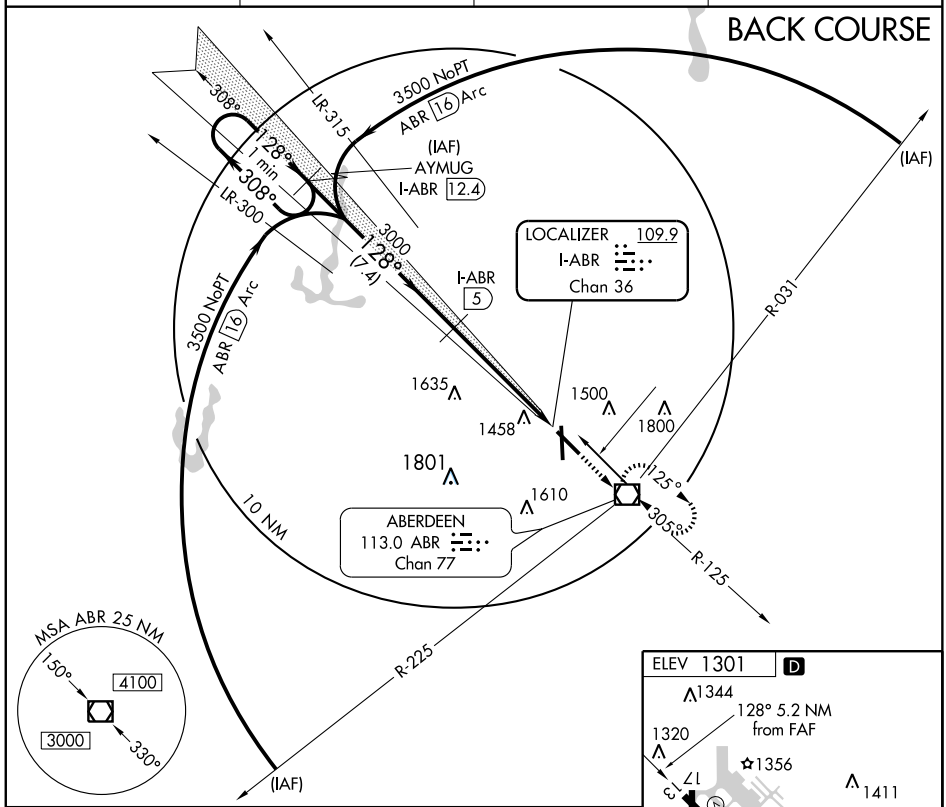
LOC/DME I-ABR	APP CRS	Rwy ldg	6901
109.9	128°	TDZE	1301
Chan 36		Apt Elev	1301

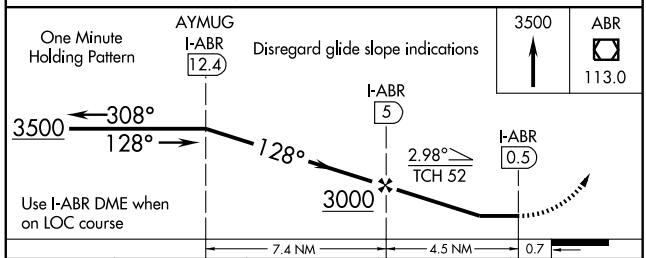
LOC/DME BC RWY 13
ABERDEEN RGNL (ABR)

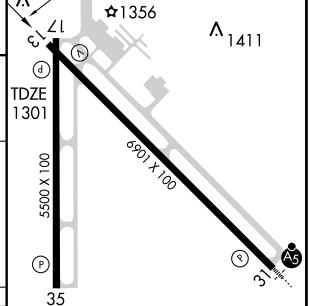
NA

MISSED APPROACH: Climb to 3500 direct ABR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95







CATEGORY	A	B	C	D
S-13	1760-1	459 (500-1)	1760-1¼ 459 (500-1¼)	1760-1½ 459 (500-1½)
CIRCLING	1760-1	459 (500-1)	1760-1½ 459 (500-1½)	1860-2 559 (600-2)

HIRL Rwy 13-31 L
MIRL Rwy 17-35 L
REIL Rwys 13, 17 and 35 L

NC-1. 03 JUN 2010 to 01 JUL 2010

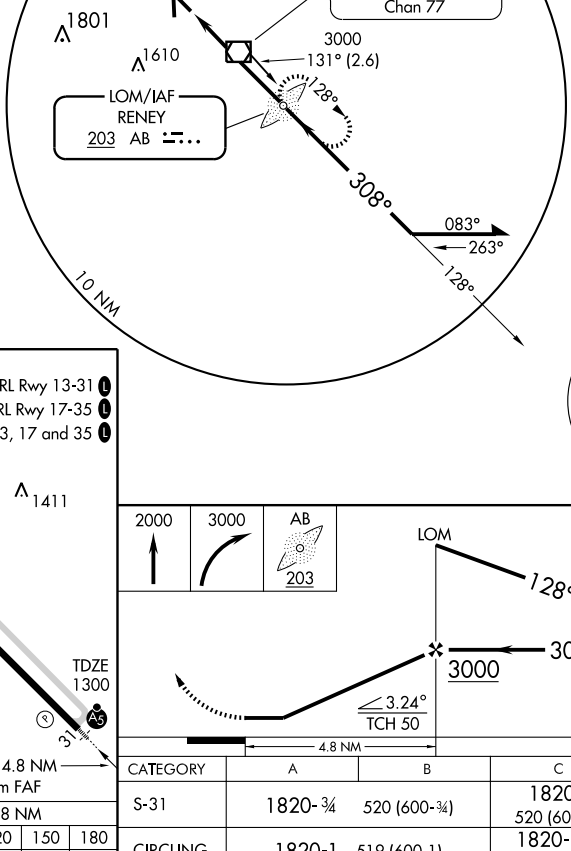
LOM AB	APP CRS	Rwy ldg	6901
203	308°	TDZE	1300
		Apt Elev	1301

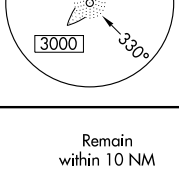
NDB RWY 31
ABERDEEN RGNL (ABR)

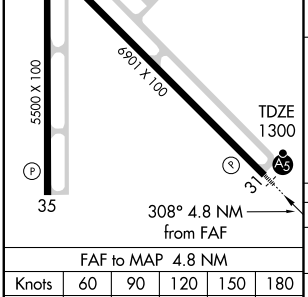
MALSR

MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct AB LOM and hold.

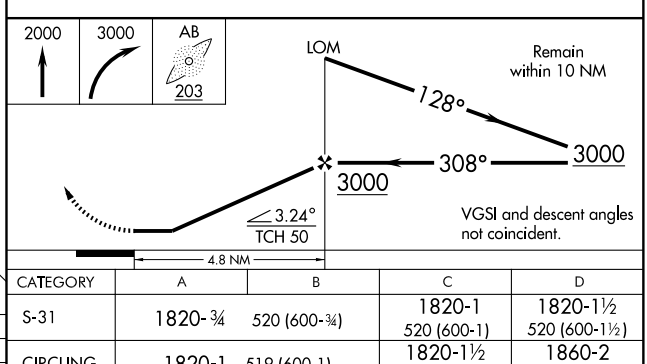
ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95







FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36



CATEGORY	A	B	C	D
S-31	1820-¾ 520 (600-¾)		1820-1 520 (600-1)	1820-1½ 520 (600-1½)
CIRCLING	1820-1 519 (600-1)		1820-1½ 519 (600-1½)	1860-2 559 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

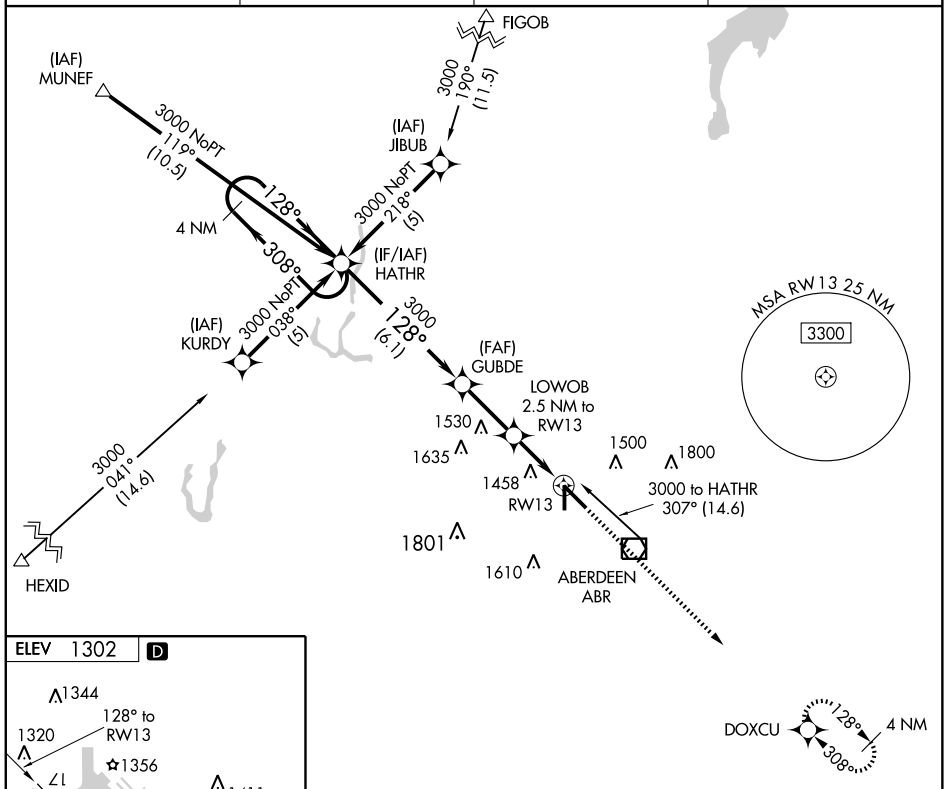
APP CRS	Rwy ldg	6901
128°	TDZE	1302
	Apt Elev	1302

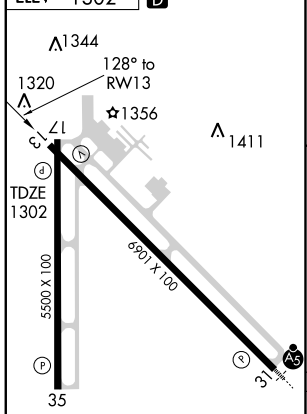
RNAV (GPS) RWY 13
ABERDEEN RGNL (ABR)

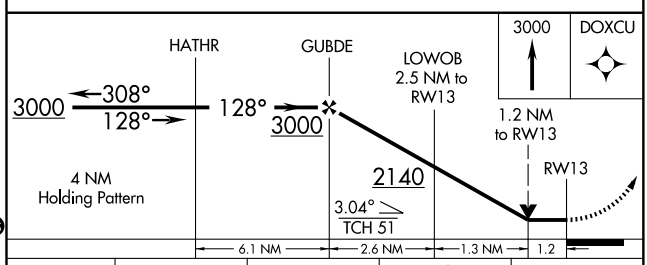
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA when using Watertown altimeter setting. When local altimeter setting not received use Watertown altimeter setting and increase all MDA 220 feet, increase LNAV Cat C visibility ½ mile, Cat D visibility ¾ mile and Circling Cats C and D visibility ½ mile.

MISSED APPROACH: Climb to 3000 direct DOXCU and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95







HIRL Rwy 13-31 L
MIRL Rwy 17-35 L
REIL Rwys 13, 17 and 35 L

CATEGORY	A	B	C	D
LNAV MDA	1720-1 418 (500-1)		1720-1¼ 418 (500-1¼)	
CIRCLING	1760-1 458 (500-1)		1760-1½ 458 (500-1½)	1860-2 558 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 42914 W31A	APP CRS 308°	Rwy ldg 6901 TDZE 1301 Apt Elev 1302

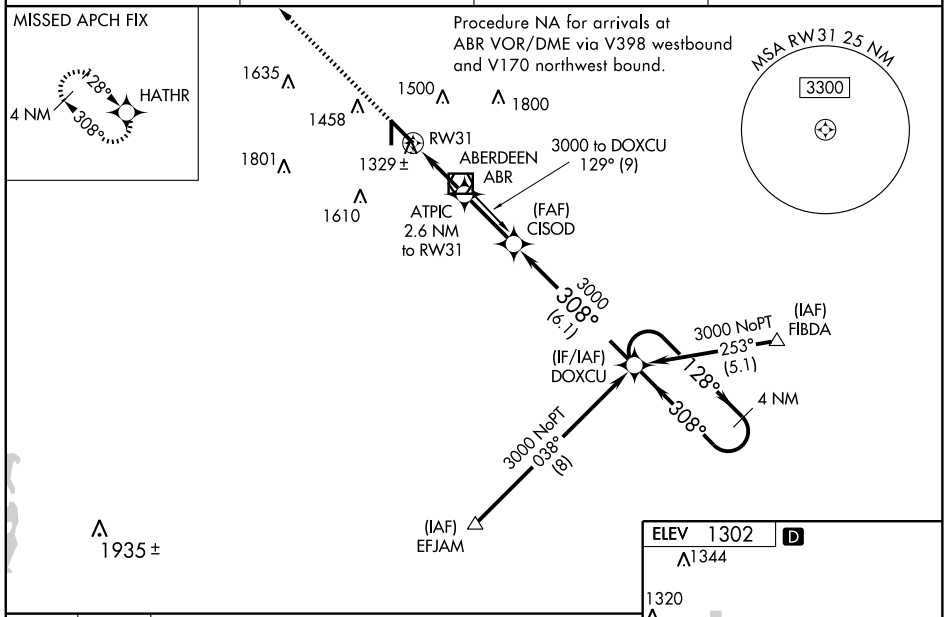
RNAV (GPS) RWY 31
ABERDEEN RGNL (ABR)

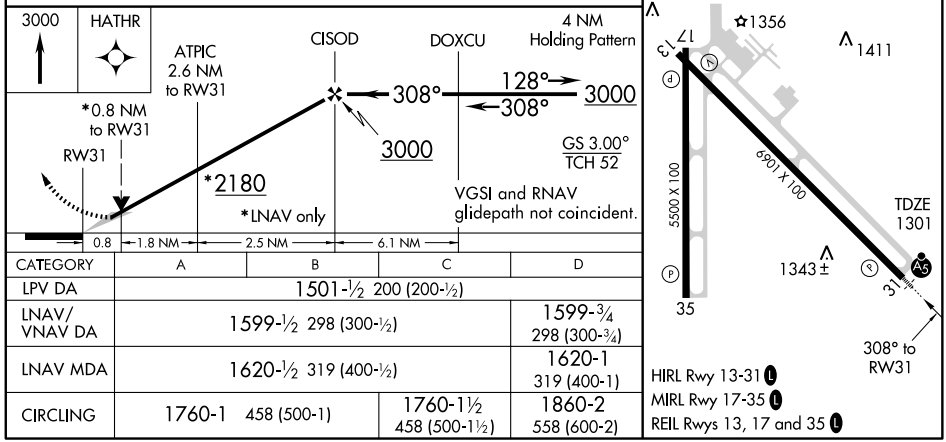
Inoperative table does not apply to LNAV Cat D visibility. For inoperative MALSR, increase LNAV/VNAV Cat D visibility to 1. Baro-VNAV NA when using Watertown altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. VDP NA when using Watertown altimeter setting. For inoperative MALSR when using Watertown altimeter setting increase LPV all Cats visibility to 1½ . When local altimeter setting not received, use Watertown altimeter setting and increase all DA 207 feet, all MDA 220 feet, LPV all Cats visibility ¼ mile, LNAV/VNAV Cats A, B and C visibility ¾ mile, Cat D visibility ½ mile, LNAV Cat C visibility ½ mile, Cat D visibility ¼ mile and Circling Cats C and D visibility ½ mile.

MALSR

MISSED APPROACH: Climb to 3000 direct HATHR and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95





CATEGORY	A	B	C	D
LPV DA	1501-½ 200 (200-½)			
LNAV/ VNAV DA	1599-½ 298 (300-½)			1599-¾ 298 (300-¾)
LNAV MDA	1620-½ 319 (400-½)			1620-1 319 (400-1)
CIRCLING	1760-1 458 (500-1)		1760-1½ 458 (500-1½)	1860-2 558 (600-2)

WAAS CH 65800 W35A	APP CRS 353°	Rwy ldg 5500 TDZE 1301 Apt Elev 1302

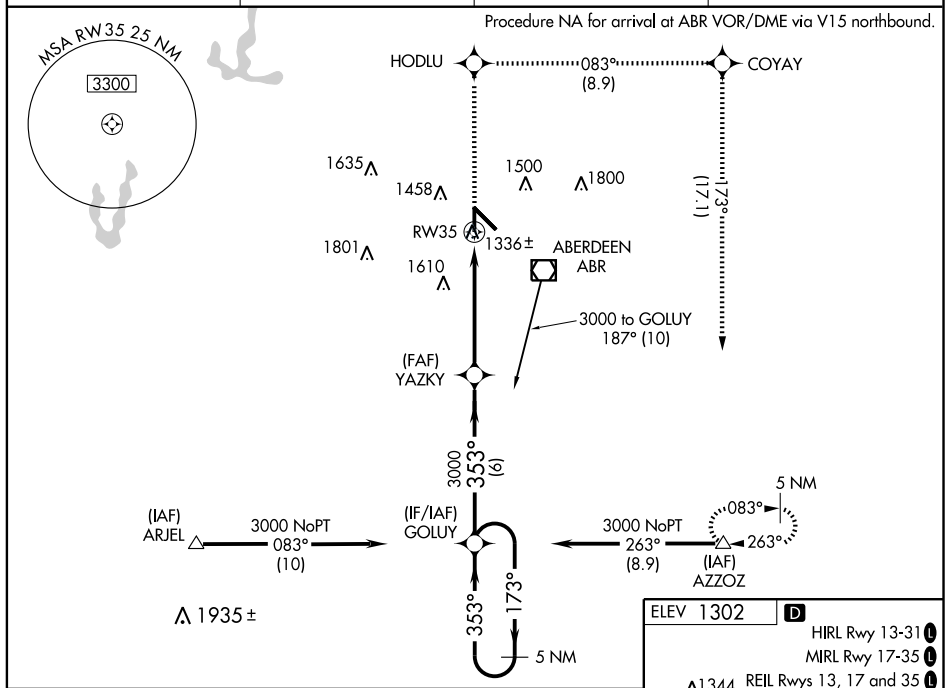
RNAV (GPS) RWY 35
ABERDEEN RGNL (ABR)

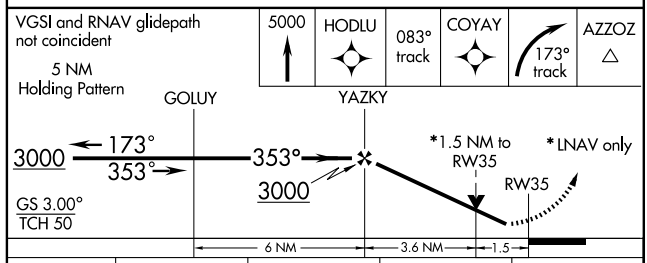
If local altimeter setting not received, use Watertown Rgnl altimeter setting and increase all DAs/MDAs 220 feet.
Baro-VNAV and VDP NA when using Watertown Rgnl altimeter setting.
DME/DME RNP -0.3 NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).

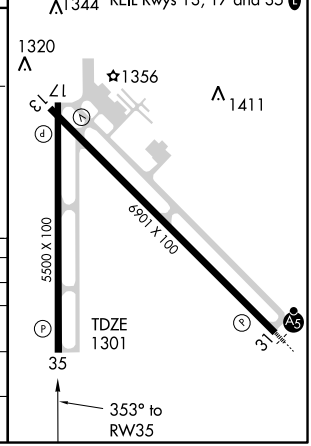
MISSED APPROACH: Climb to 5000 direct HODLU and via 083° track to COYAY and right turn via 173° track to AZZOZ and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95

Procedure NA for arrival at ABR VOR/DME via V15 northbound.







CATEGORY	A	B	C	D
LPV DA	1551-¾ 250 (300-¾)			
LNAV/VNAV DA	1586-1 285 (300-1)			
LNAV MDA	1820-1 519 (600-1)		1820-1½ 519 (600-1½)	1820-1¾ 519 (600-1¾)
CIRCLING	1820-1 518 (600-1)		1820-1½ 518 (600-1½)	1860-2 558 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

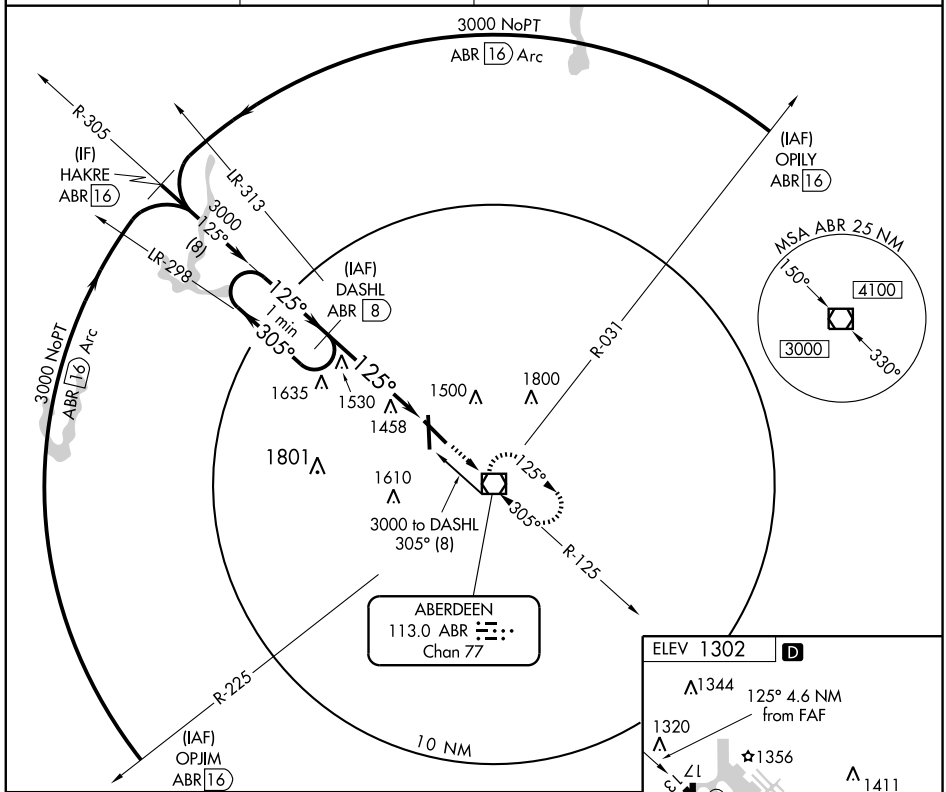
VOR/DME ABR	APP CRS	Rwy ldg	6901
113.0	125°	TDZE	1302
Chan 77		Apt Elev	1302

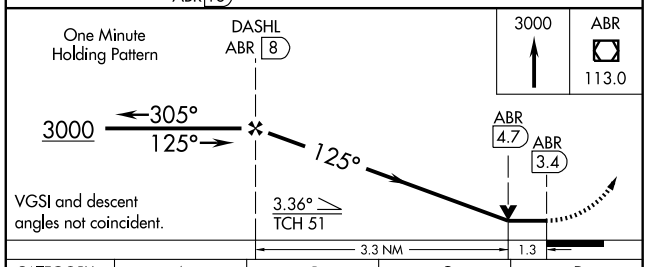
VOR/DME RWY 13
ABERDEEN RGNL (ABR)

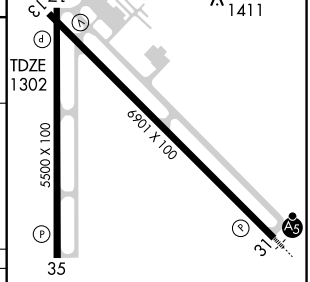
Visibility reduction by helicopters NA. When local altimeter setting not received, use Watertown altimeter setting and increase all MDA 220 feet, increase S-13 Cats C and D visibility ¾ mile and Circling Cats C and D visibility ½ mile. VDP NA when using Watertown altimeter setting.

MISSED APPROACH: Climb to 3000 direct ABR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95







HIRL Rwy 13-31 L
MIRL Rwy 17-35 L
REIL Rwys 13, 17 and 35 L

CATEGORY	A	B	C	D
S-13	1780-1 478 (500-1)		1780-1¼ 478 (500-1¼)	1780-1½ 478 (500-1½)
CIRCLING	1780-1 478 (500-1)		1780-1½ 478 (500-1½)	1860-2 558 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

VOR RWY 31
ABERDEEN RGNL(ABR)

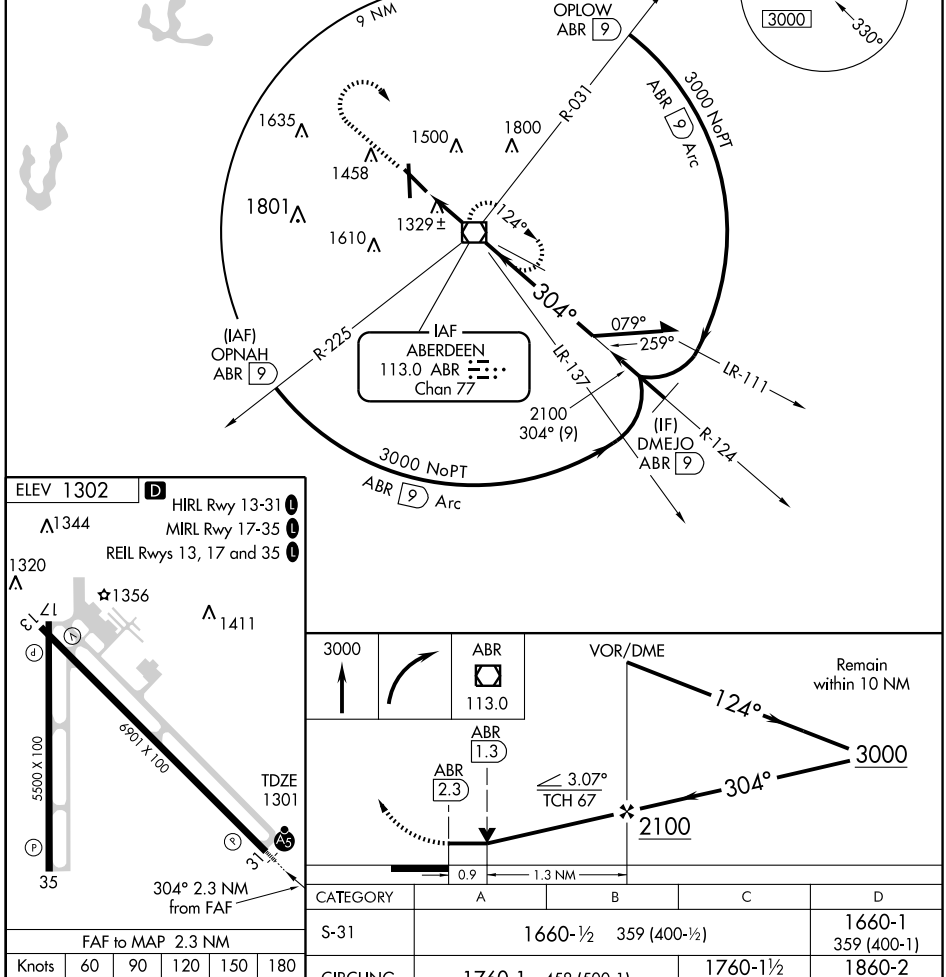
VOR/DME ABR	APP CRS	Rwy ldg	6901
113.0	304°	TDZE	1301
Chan 77		Apt Elev	1302

For inoperative MALSR, increase S-31 Cat D visibility to 1¼.
When local altimeter setting not received, use Watertown altimeter setting and increase all MDA 220 feet, increase S-31 Cat C visibility ½ mile, Cat D visibility ¼ mile, and Circling Cats C and D ½ mile.
VDP NA when using Watertown altimeter setting.

MALSR

MISSED APPROACH: Climb to 3000 then right turn direct ABR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
125.875	120.6 371.9	122.7 L	122.95



FAF to MAP 2.3 NM					
Knots	60	90	120	150	180
Min:Sec	2:18	1:32	1:09	0:55	0:46

CATEGORY	A	B	C	D
S-31	1660-½ 359 (400-½)			1660-1 359 (400-1)
CIRCLING	1760-1 458 (500-1)		1760-1½ 458 (500-1½)	1860-2 558 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	4501
321°	TDZE	3179
	Apt Elev	3190

RNAV (GPS) RWY 32
BELLE FOURCHE MUNI (EFC)

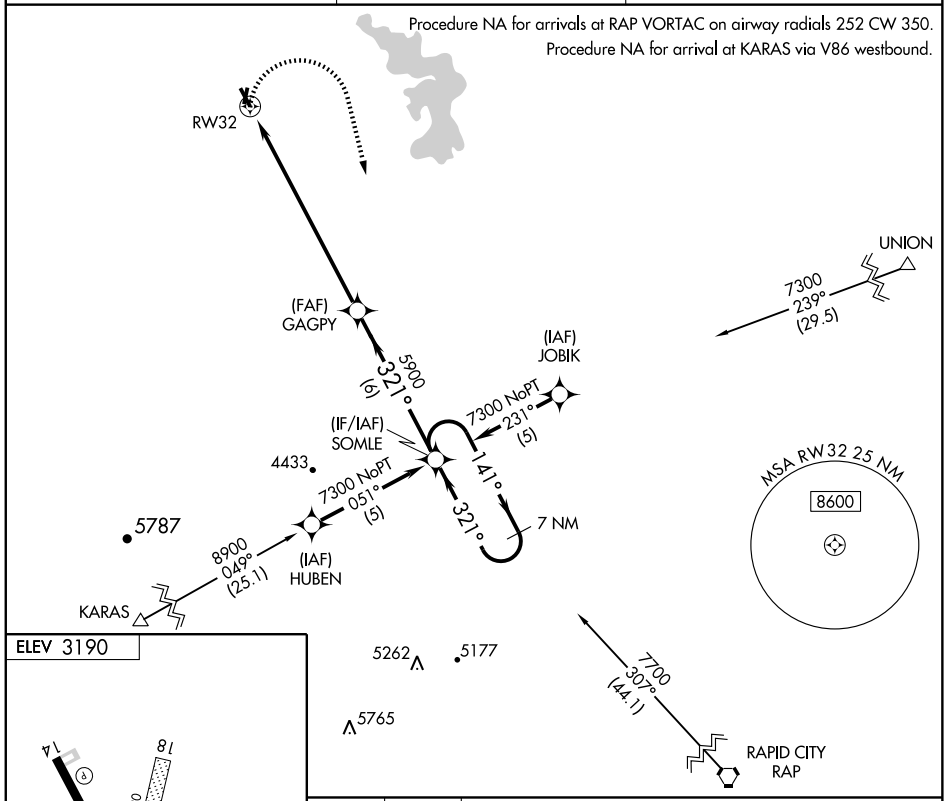
T NA

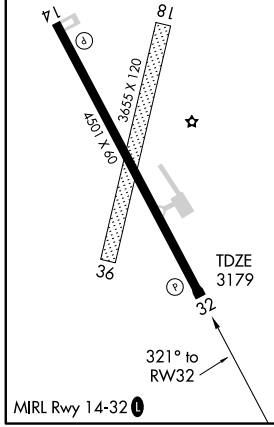
DME/DME RNP -0.3 NA.
Visibility reduction by helicopters NA.
Use Ellsworth AFB altimeter setting, when not received, use Rapid City Rgnl altimeter setting.

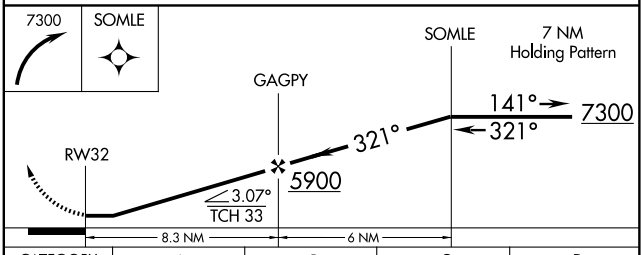
MISSED APPROACH: Climbing right turn to 7300 direct SOMLE and hold.

AWOS-A	DENVER CENTER	UNICOM
122.8	127.95 338.2	122.8 (CTAF) L

Procedure NA for arrivals at RAP VORTAC on airway radials 252 CW 350.
Procedure NA for arrival at KARAS via V86 westbound.







CATEGORY	A	B	C	D
LNAV MDA	4140-1¼ 961 (1000-1¼)	4140-1½ 961 (1000-1½)	4140-3 961 (1000-3)	NA
CIRCLING	4140-1¼ 950 (1000-1¼)	4140-1½ 950 (1000-1½)	4140-3 950 (1000-3)	NA

APP CRS	Rwy ldg	4210
129°	TDZE	1318
	Apt Elev	1318

RNAV (GPS) RWY 13
BRITTON MUNI (BTN)

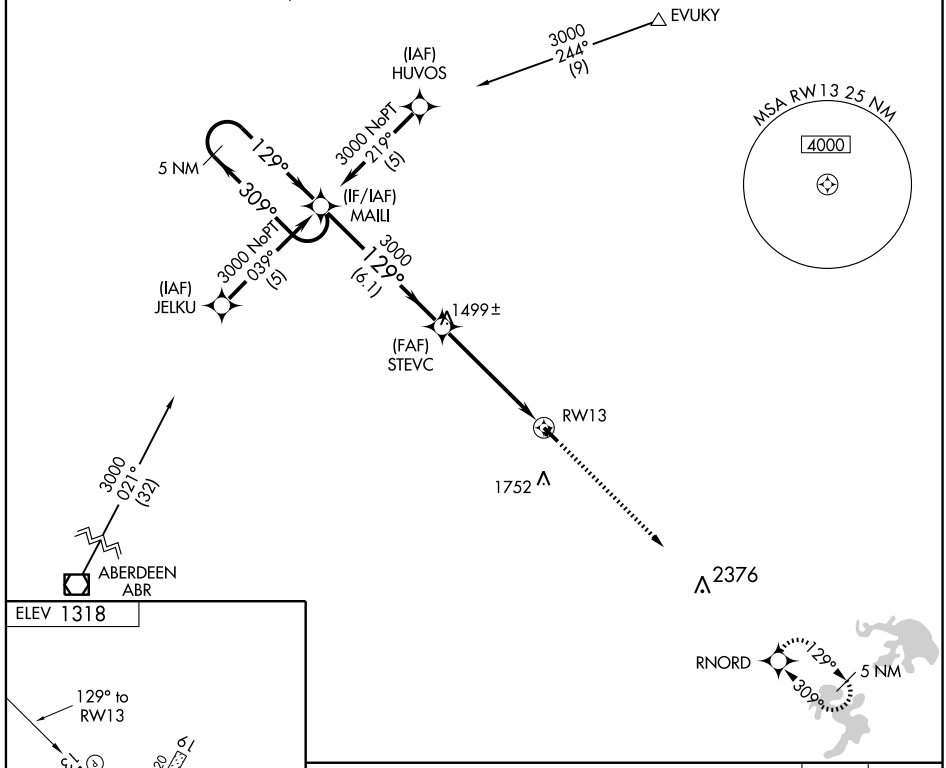
T A NA

DME/DME RNP- 0.3 NA.
If local altimeter setting not received, use Aberdeen altimeter setting and increase all MDAs 100 feet.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3500 direct RNORD and hold.

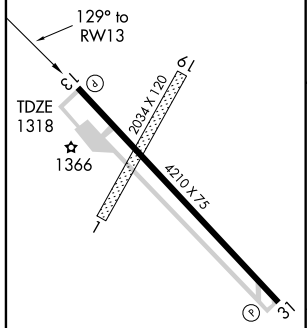
MINNEAPOLIS CENTER	UNICOM
120.6 371.9	**122.8** (CTAF)

Procedure NA for arrivals at ABR VOR/DME via V170 southbound.

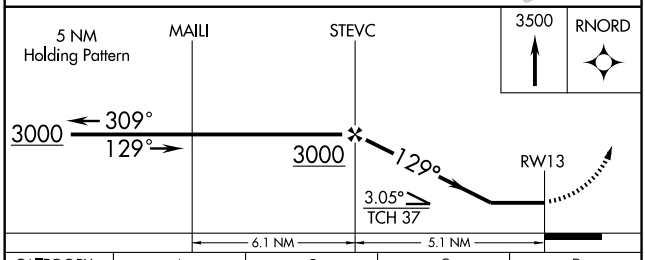


NC-1. 03 JUN 2010 to 01 JUL 2010

ELEV 1318



MIRL Rwy 13-31



CATEGORY	A	B	C	D
LNAV MDA	1840-1 522 (600-1)		1840-1½ 522 (600-1½)	NA
CIRCLING	1900-1 582 (600-1)		2060-2¼ 742 (800-2¼)	NA

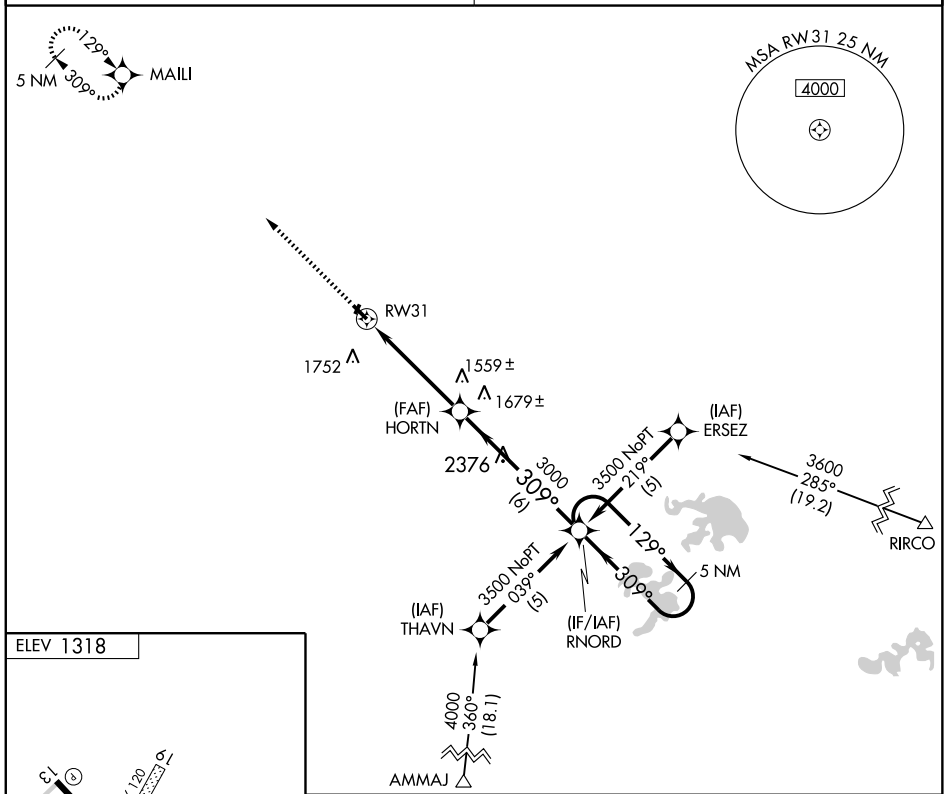
APP CRS		
309°	Rwy ldg	4210
	TDZE	1318
	Apt Elev	1318

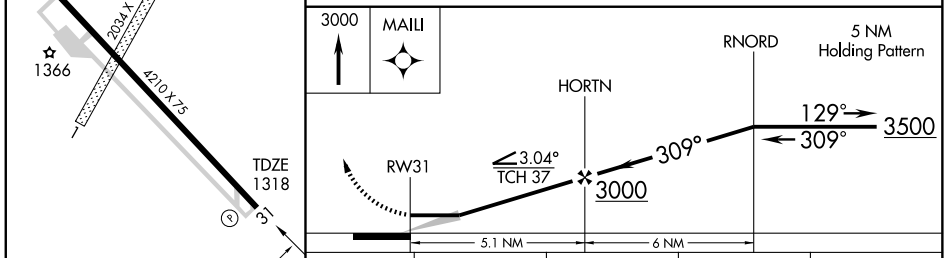
RNAV (GPS) RWY 31
BRITTON MUNI (BTN)

DME/DME RNP-0.3 NA.
NA If local altimeter setting not received, use Aberdeen altimeter setting and increase all MDAs 100 feet. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct MAILI and hold.

MINNEAPOLIS CENTER	UNICOM
120.6 371.9	122.8 (CTAF)





CATEGORY	A	B	C	D
LNAV MDA	1820-1 502 (600-1)		1820-1½ 502 (600-1½)	NA
CIRCLING	1900-1 582 (600-1)		2060-2¼ 742 (800-2¼)	NA

MIRL Rwy 13-31

NC-1. 03 JUN 2010 to 01 JUL 2010

LOC I-BKX	APP CRS	Rwy ldg	5231
110.9	303°	TDZE	1629
		Apt Elev	1648

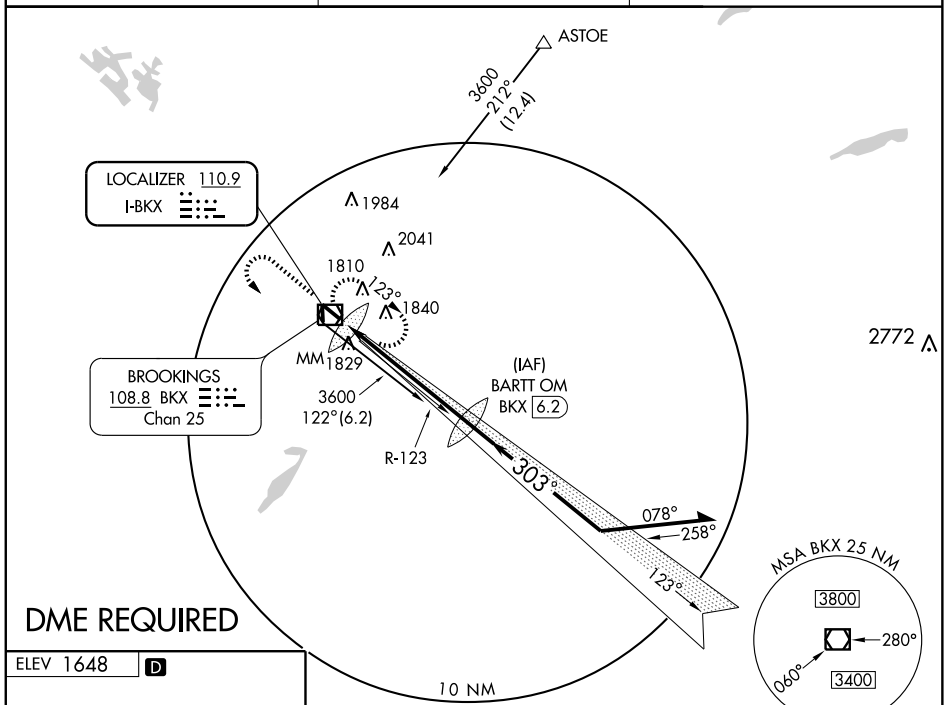
ILS or LOC RWY 30
BROOKINGS RGNL (BKX)

T
A NA

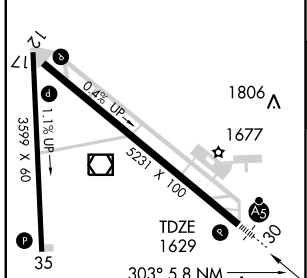
MALSR

MISSED APPROACH: Climb to 3600 then left turn direct BKX VOR/DME and hold.

AWOS-3	HURON RADIO	UNICOM
108.8	122.65	123.0 (CTAF) L

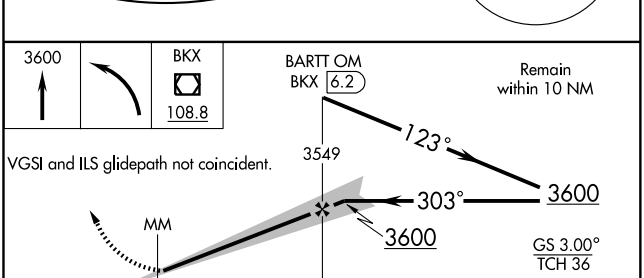


ELEV 1648 D



HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwy 30
REIL Rwys 12, 17 and 35 L

FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56



CATEGORY	A	B	C	D
S-ILS 30	1829-½ 200 (200-½)			
S-LOC 30	2040-½ 411 (400-½)		2040-¾ 411 (400-¾)	
CIRCLING	2140-1 492 (500-1)		2140-1½ 492 (500-1½)	2200-2 552 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

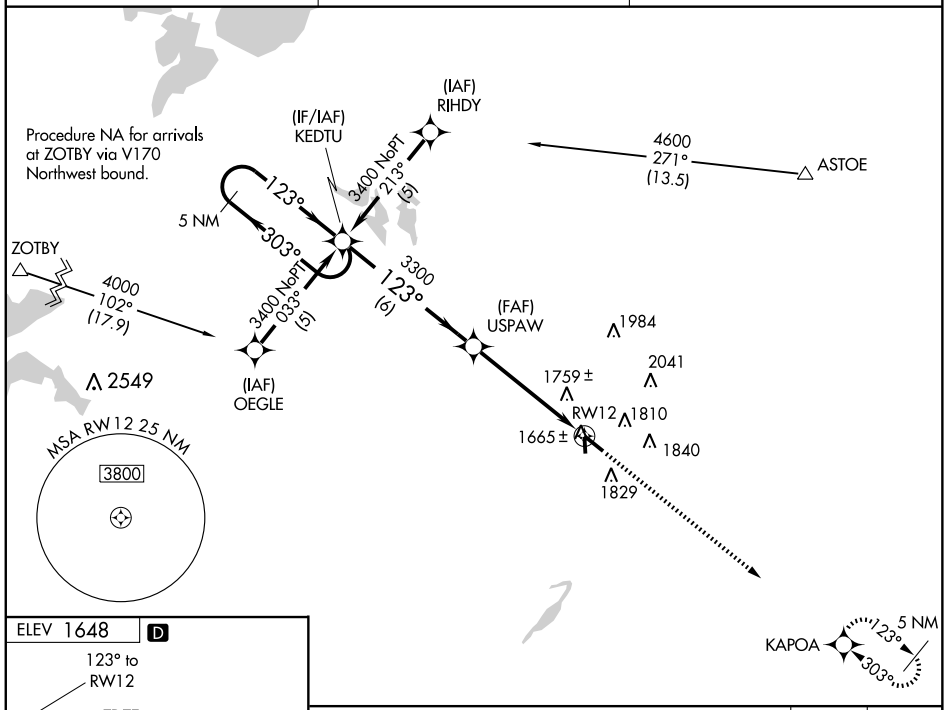
WAAS Chan **72799** W12A	APP CRS **123°**	Rwy ldg **5231** TDZE **1620** Apt Elev **1648**

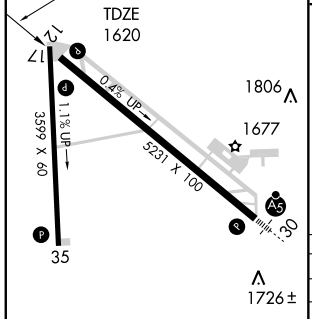
RNAV (GPS) RWY 12
BROOKINGS RGNL (BKX)

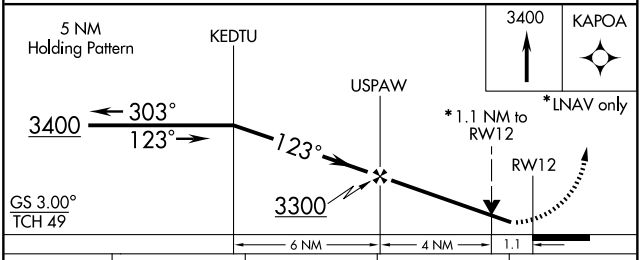
If local altimeter setting not received, use Pipestone Muni altimeter setting and increase all DAs/MDAs 100 feet.
VDP and Baro-VNAV NA when using Pipestone Muni altimeter setting.
Baro-VNAV NA below -18°C (0°F).
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3400 direct KAPOA and hold.

AWOS-3	HURON RADIO	UNICOM
108.8	**122.65**	**123.0** (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1870-1 250 (300-1)			
LNAV/VNAV DA	1956-1¼ 336 (400-1¼)			
LNAV MDA	2020-1 400 (400-1)			2020-1¼ 400 (400-1¼)
CIRCLING	2140-1¼ 492 (500-1¼)		2140-1½ 492 (500-1½)	2200-2 552 (600-2)

HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwy 30
REIL Rwys 12, 17 and 35 L

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS Chan **69399** W30A	APP CRS **303°**	Rwy ldg **5231** TDZE **1629** Apt Elev **1648**

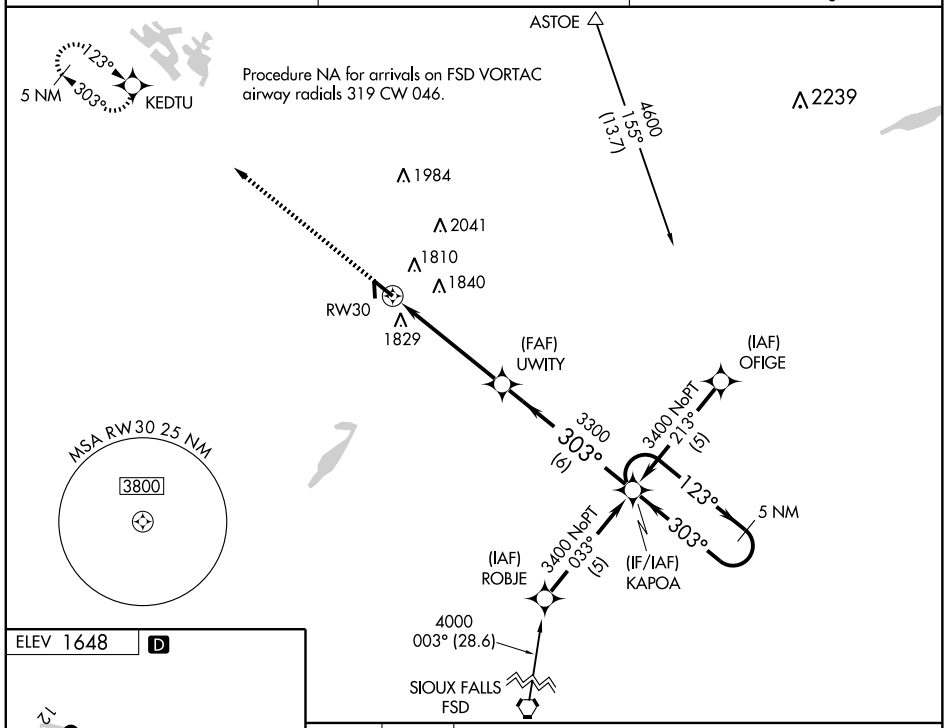
RNAV (GPS) RWY 30
BROOKINGS RGNL (BKX)

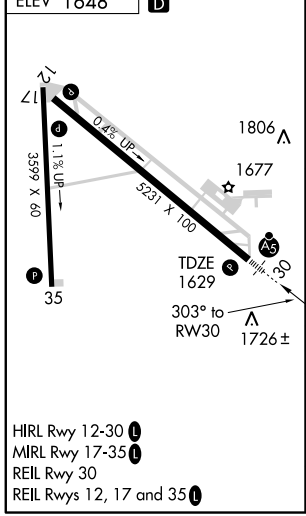
If local altimeter setting not received, use Pipestone Muni altimeter setting and increase all DAs/MDAs 100 feet.
Baro-VNAV NA below -18°C (0°F). DME/DME RNP- 0.3 NA.
VDP and Baro-VNAV NA when using Pipestone Muni altimeter setting.
For inoperative MALSR increase LPV all Cats visibility to 1.

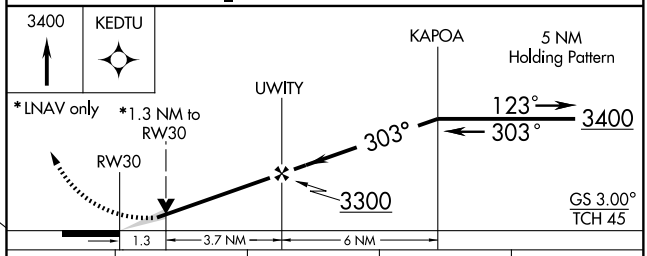
MALSR

MISSED APPROACH: Climb to 3400 direct KEDTU and hold.

AWOS-3	HURON RADIO	UNICOM
108.8	**122.65**	**123.0** (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1934-½ 305 (300-½)			
LNAV/VNAV DA	2138-1¼ 509 (500-1¼)			
LNAV MDA	2080-½ 451 (500-½)		2080-¾ 451 (500-¾)	2080-1 451 (500-1)
CIRCLING	2140-1¾ 492 (500-1¾)			2200-2 552 (600-2)

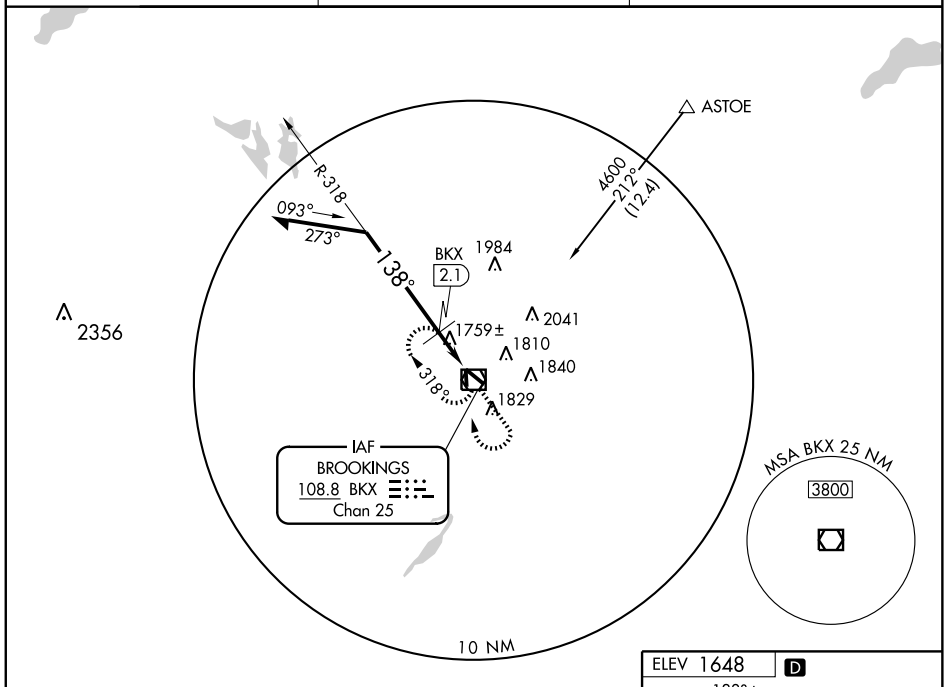
NC-1. 03 JUN 2010 to 01 JUL 2010

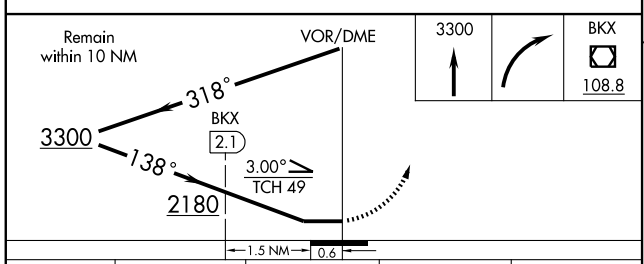
VOR/DME BKX	APP CRS	Rwy ldg	5231
108.8	138°	TDZE	1620
Chan 25		Apt Elev	1648

VOR RWY 12
BROOKINGS RGNL (BKX)

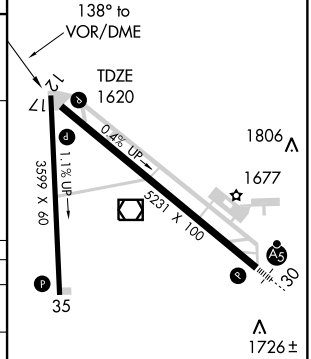
MISSED APPROACH: Climb to 3300 then right turn direct BKX VOR/DME and hold.

AWOS-3	HURON RADIO	UNICOM
108.8	122.65	123.0 (CTAF) L





CATEGORY	A	B	C	D
S-12	2180-1	560 (600-1)	2180-1½ 560 (600-1½)	2180-1¾ 560 (600-1¾)
CIRCLING	2180-1	532 (600-1)	2180-1½ 532 (600-1½)	2200-2 552 (600-2)
DME MINIMUMS				
S-12	2040-1	420 (400-1)	2040-1¼ 420 (400-1¼)	
CIRCLING	2140-1	492 (500-1)	2140-1½ 492 (500-1½)	2200-2 552 (600-2)



HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwy 30
REIL Rwys 12, 17 and 35 L

NC-1. 03 JUN 2010 to 01 JUL 2010

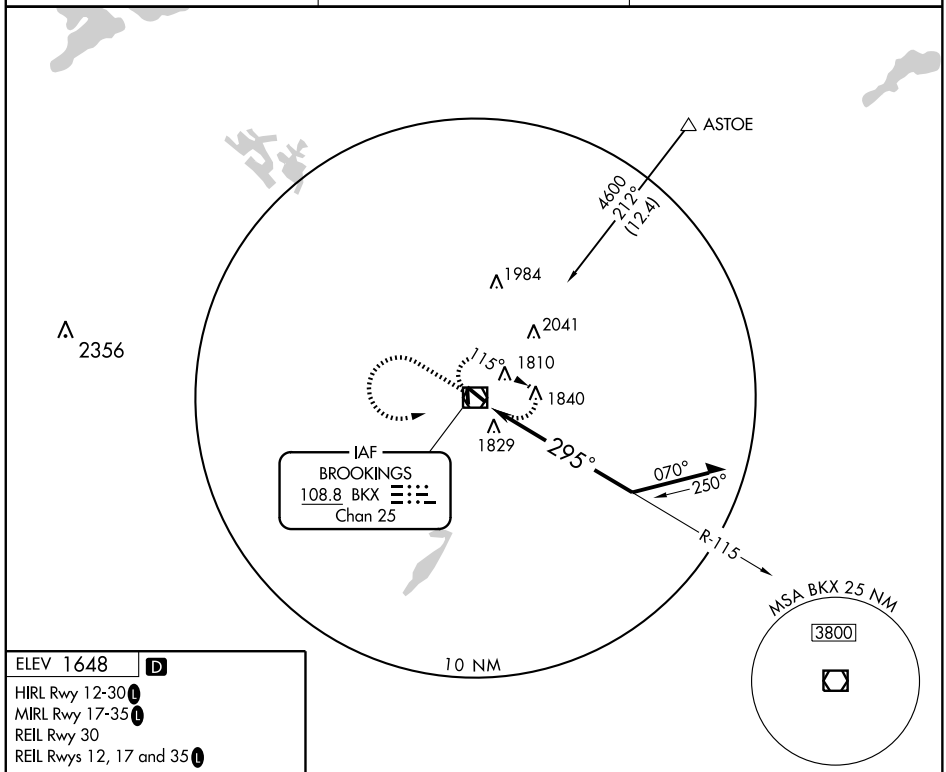
VOR/DME BKX	APP CRS	Rwy ldg	5231
108.8	295°	TDZE	1629
Chan 25		Apt Elev	1648

VOR RWY 30
BROOKINGS RGNL (BKX)

MALSR

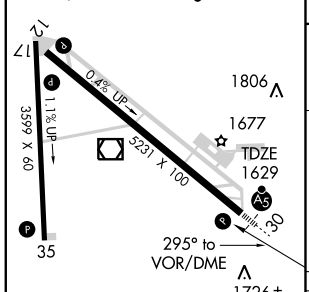
MISSED APPROACH: Climb to 3300 then left turn direct BKX VOR/DME and hold.

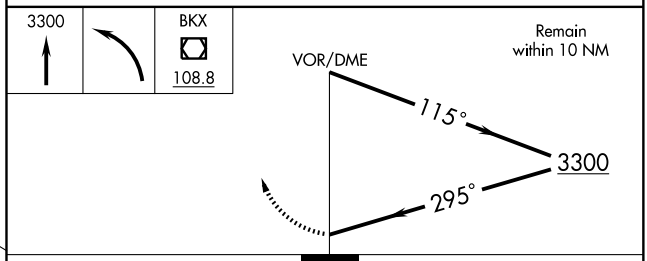
AWOS-3	HURON RADIO	UNICOM
108.8	122.65	123.0 (CTAF) L



ELEV 1648 D

HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwy 30
REIL Rwys 12, 17 and 35 L





CATEGORY	A	B	C	D
S-30	2660-¾ 1031 (1100-¾)	2660-1 1031 (1100-1)	2660-2½ 1031 (1100-2½)	
CIRCLING	2660-1¼ 1012 (1100-1¼)	2660-1½ 1012 (1100-1½)	2660-3 1012 (1100-3)	

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	4300
133°	TDZE	1688
	Apt Elev	1695

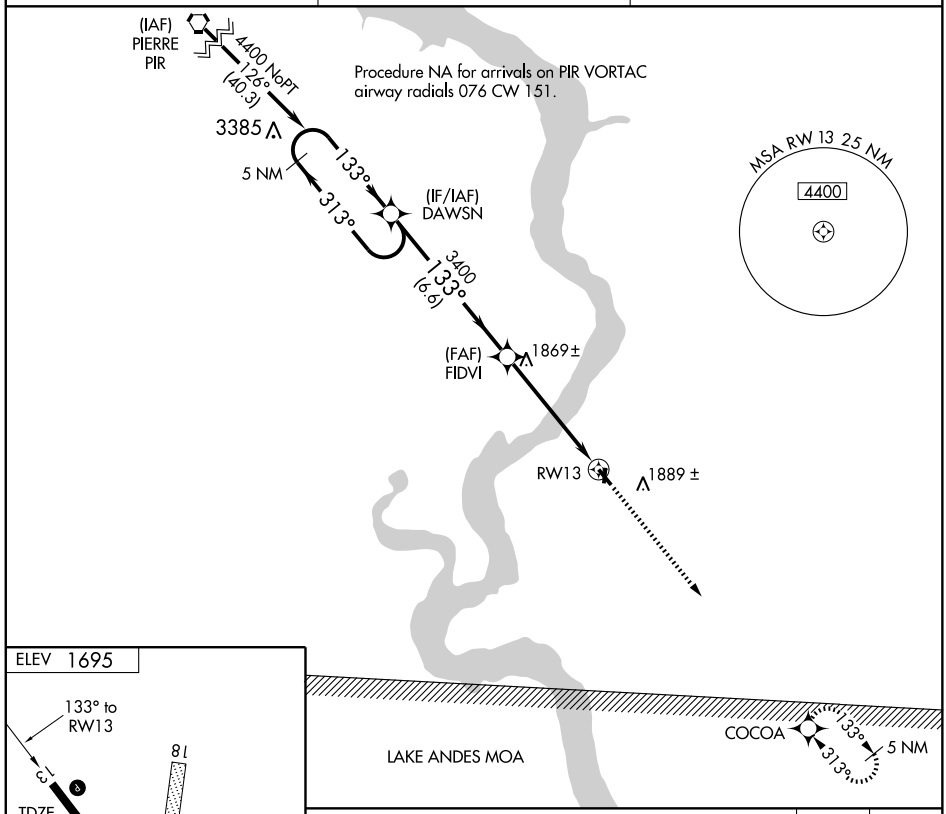
RNAV (GPS) RWY 13
CHAMBERLAIN MUNI (9V9)

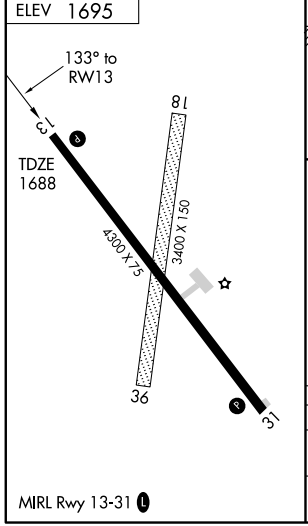
DME/DME RNP-0.3 NA.
Use Winner altimeter setting; if not recieved, use Pierre Rgnl altimeter setting and increase all MDAs 20 feet.
When VGSI inoperative, Straight-in/Circling Rwy 13 NA at night.

NA

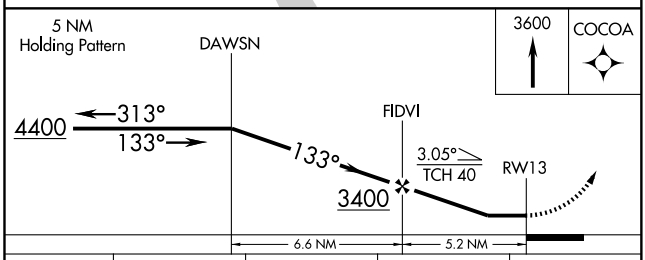
MISSED APPROACH: Climb to 3600 direct COCOA and hold.

WINNER ASOS	MINNEAPOLIS CENTER	UNICOM
126.775	125.1 269.1	122.8 (CTAF) L





MIRL Rwy 13-31 L



CATEGORY	A	B	C	D
LNAV MDA	2240-1 552 (600-1)		NA	
CIRCLING	2360-1 665 (700-1)		NA	

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	4300
313°	TDZE	1684
	Apt Elev	1695

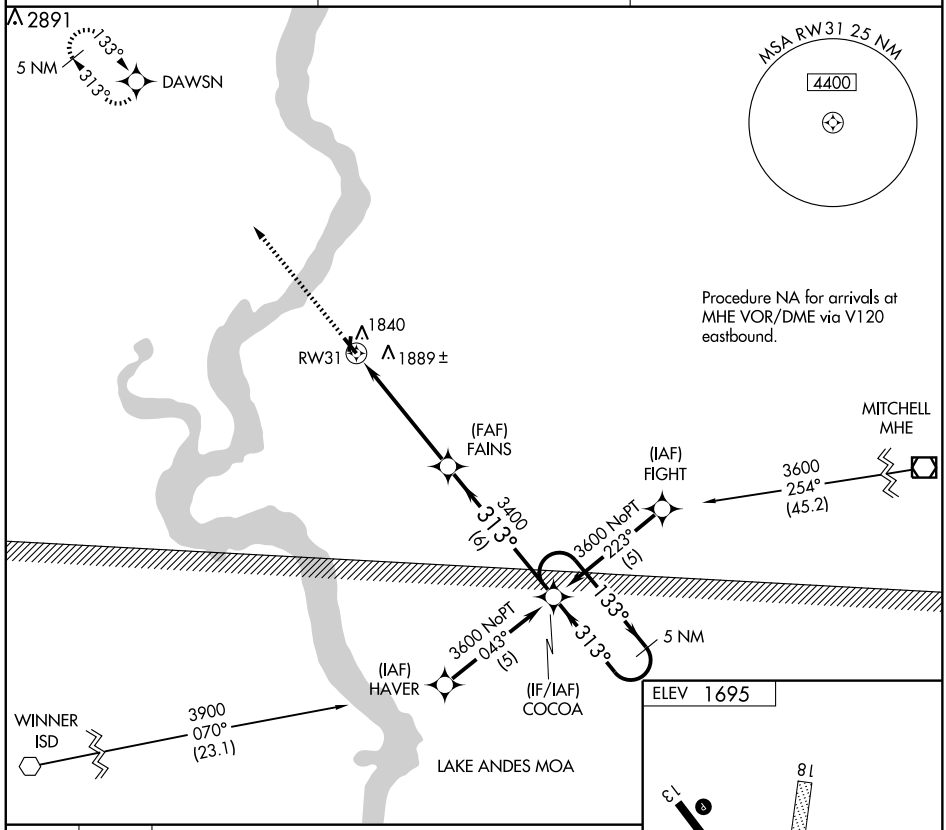
RNAV (GPS) RWY 31
CHAMBERLAIN MUNI (9V9)

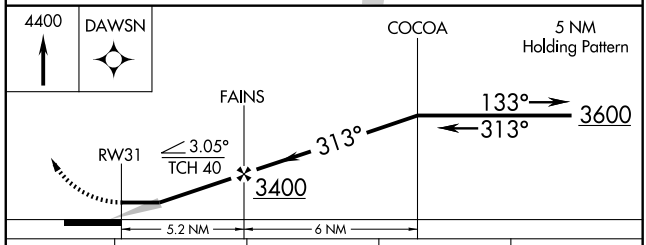
NA

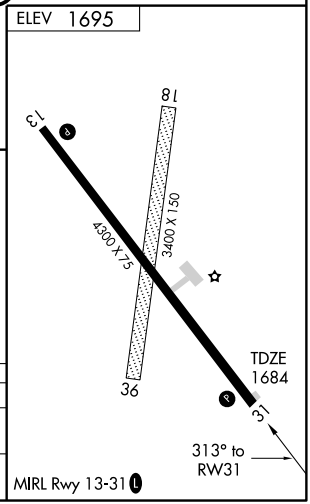
DME/DME RNP-0.3 NA.
Use Winner altimeter setting; if not received, use Pierre Rgnl altimeter setting and increase all MDAs 20 feet.

MISSED APPROACH: Climb to 4400 direct DAWSN and hold.

WINNER ASOS	MINNEAPOLIS CENTER	UNICOM
126.775	125.1 269.1	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	2220-1 536 (600-1)		NA	
CIRCLING	2360-1 665 (700-1)		NA	

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	4200
306°	TDZE	2447
	Apt Elev	2447

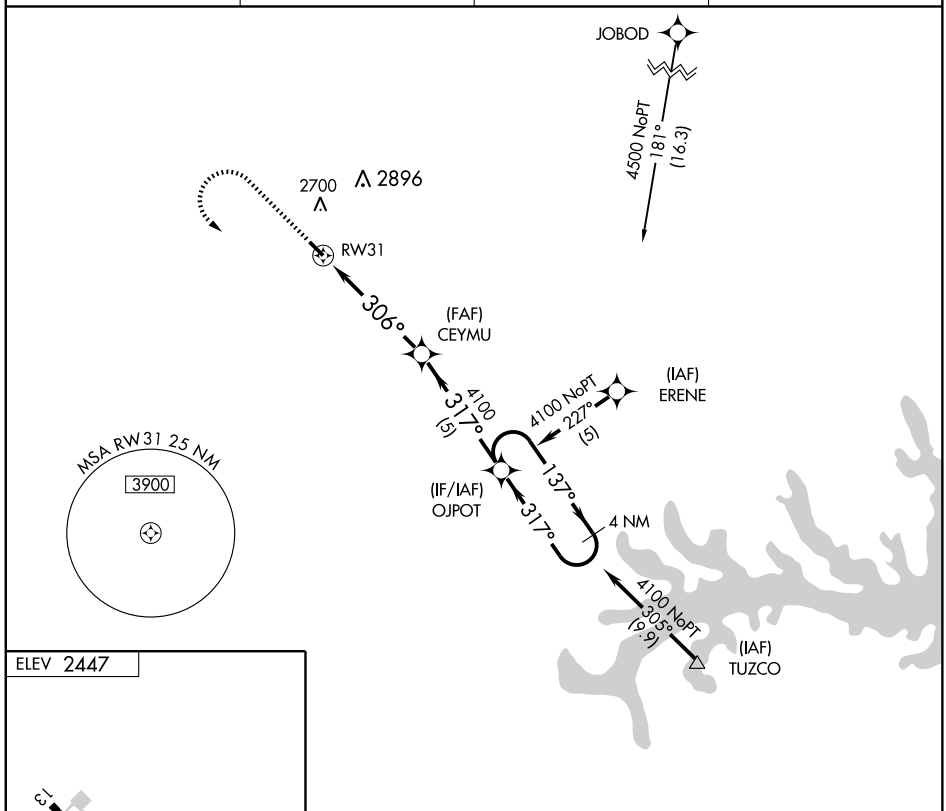
RNAV (GPS) RWY 31

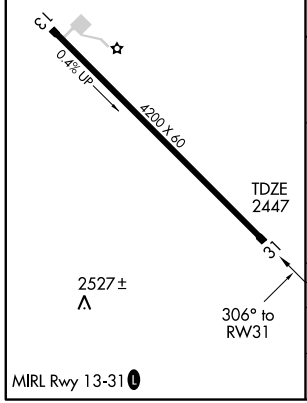
EAGLE BUTTE/CHEYENNE EAGLE BUTTE (84D)

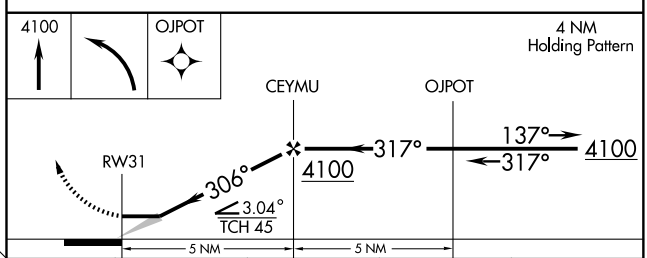
GPS or RNP-0.3 required. DME/DME RNP- 0.3 NA. Use Pierre altimeter setting.

MISSED APPROACH: Climb to 4100 then turn left direct OJPOT WP and hold.

AWOS-3	MINNEAPOLIS CENTER	CTAF	
122.8	126.8 256.7	122.9	122.8 L







CATEGORY	A	B	C	D
LNAV MDA	3020-1 573 (600-1)		NA	
CIRCLING	3240-1 793 (800-1)	3240-1¼ 793 (800-1¼)	NA	

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	4400
135°	TDZE	2061
	Apt Elev	2061

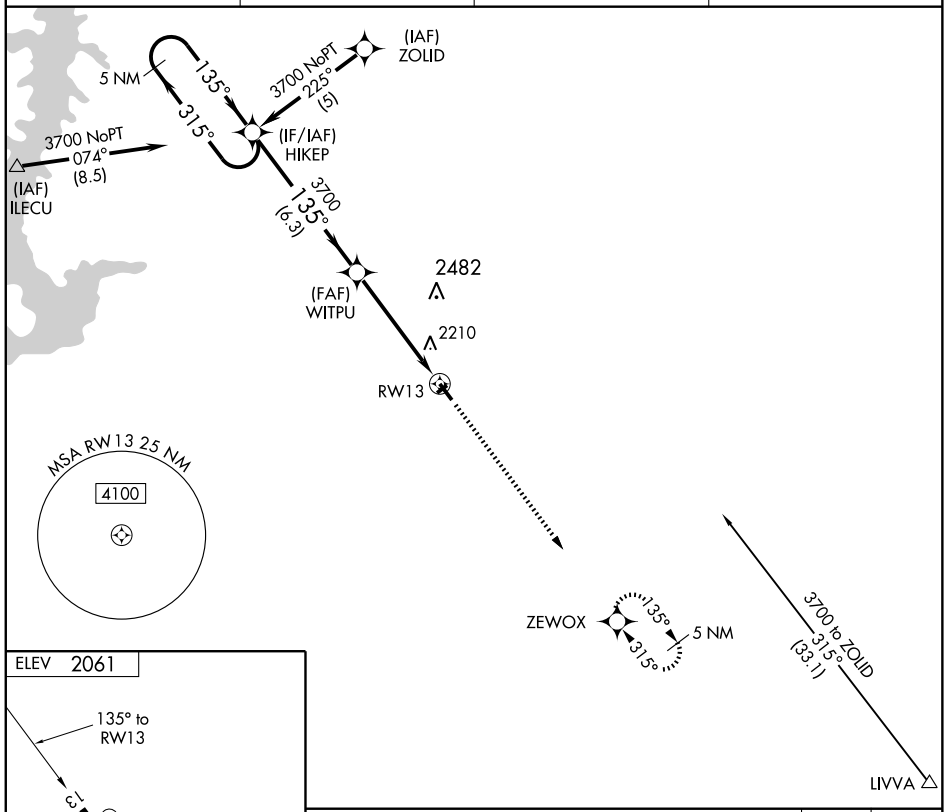
RNAV (GPS) RWY 13
GETTYSBURG MUNI (ØD8)

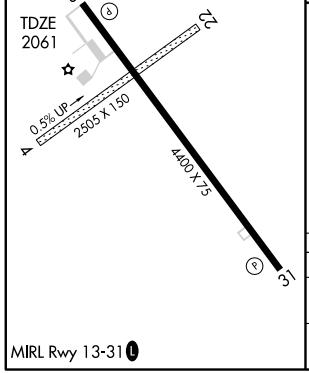
NA

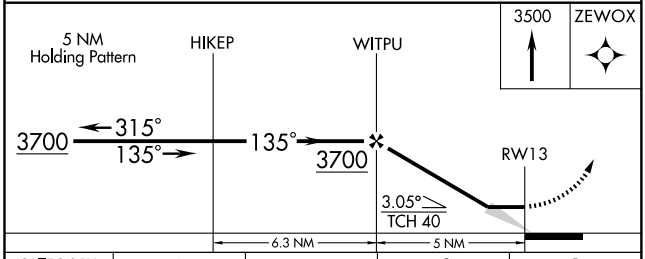
Use Pierre Rgnl altimeter setting; if not received, use Mobridge Muni altimeter setting.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3500 direct ZEWOX and hold.

AWOS-A	PIERRE RGNL ASOS	MINNEAPOLIS CENTER	UNICOM
122.9	119.025	125.1 269.1	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	2600-1 539 (600-1)		2600-1½ 539 (600-1½)	NA
CIRCLING	2660-1 599 (600-1)		2660-1½ 599 (600-1½)	NA

MIRL Rwy 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

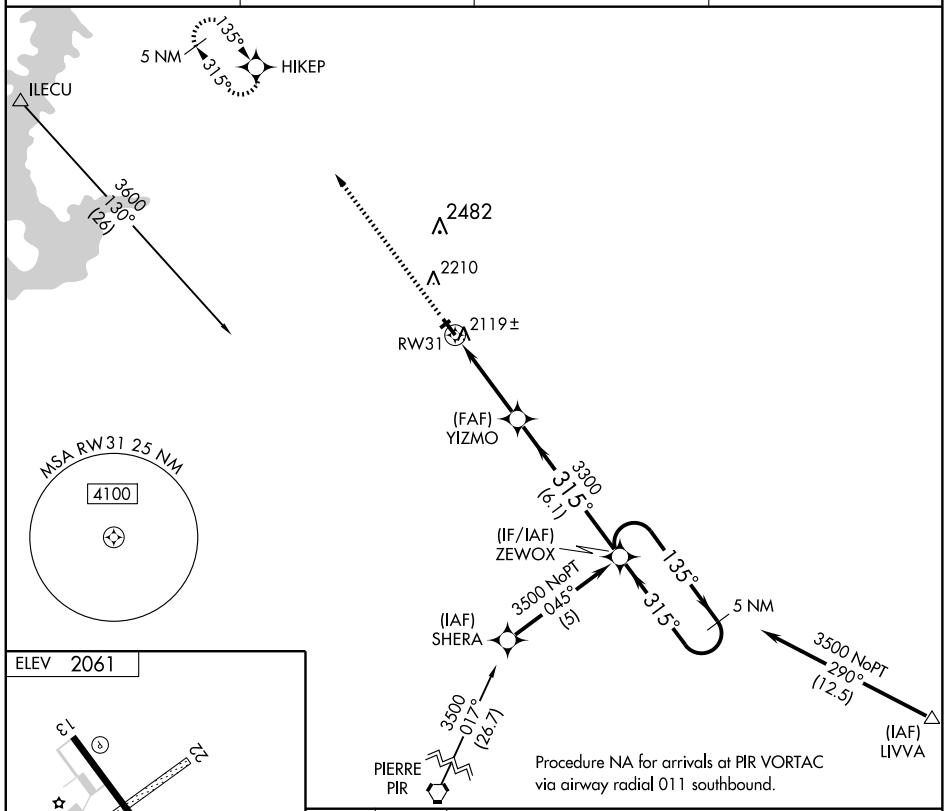
APP CRS	Rwy ldg	4400
315°	TDZE	2061
	Apt Elev	2061

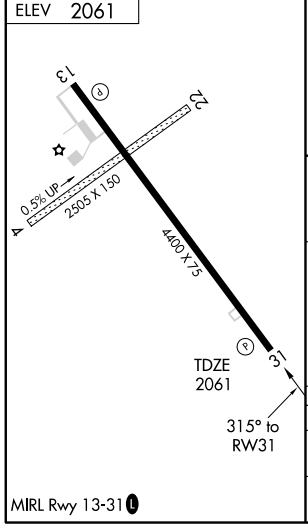
RNAV (GPS) RWY 31
GETTYSBURG MUNI (ØD8)

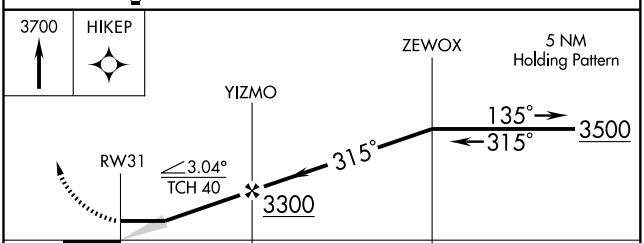
Use Pierre Rgnl altimeter setting; if not received, use Mobridge Muni altimeter setting.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3700 direct HIKEP and hold.

AWOS-A	PIERRE RGNL ASOS	MINNEAPOLIS CENTER	UNICOM
122.9	119.025	125.1 269.1	122.8 (CTAF)







CATEGORY	A	B	C	D
LNAV MDA	2540-1 479 (500-1)		2540-1¼ 479 (500-1¼)	NA
CIRCLING	2660-1 599 (600-1)		2660-1½ 599 (600-1½)	NA

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS		
308°	Rwy ldg	3800
	TDZE	2168
	Apt Elev	2168

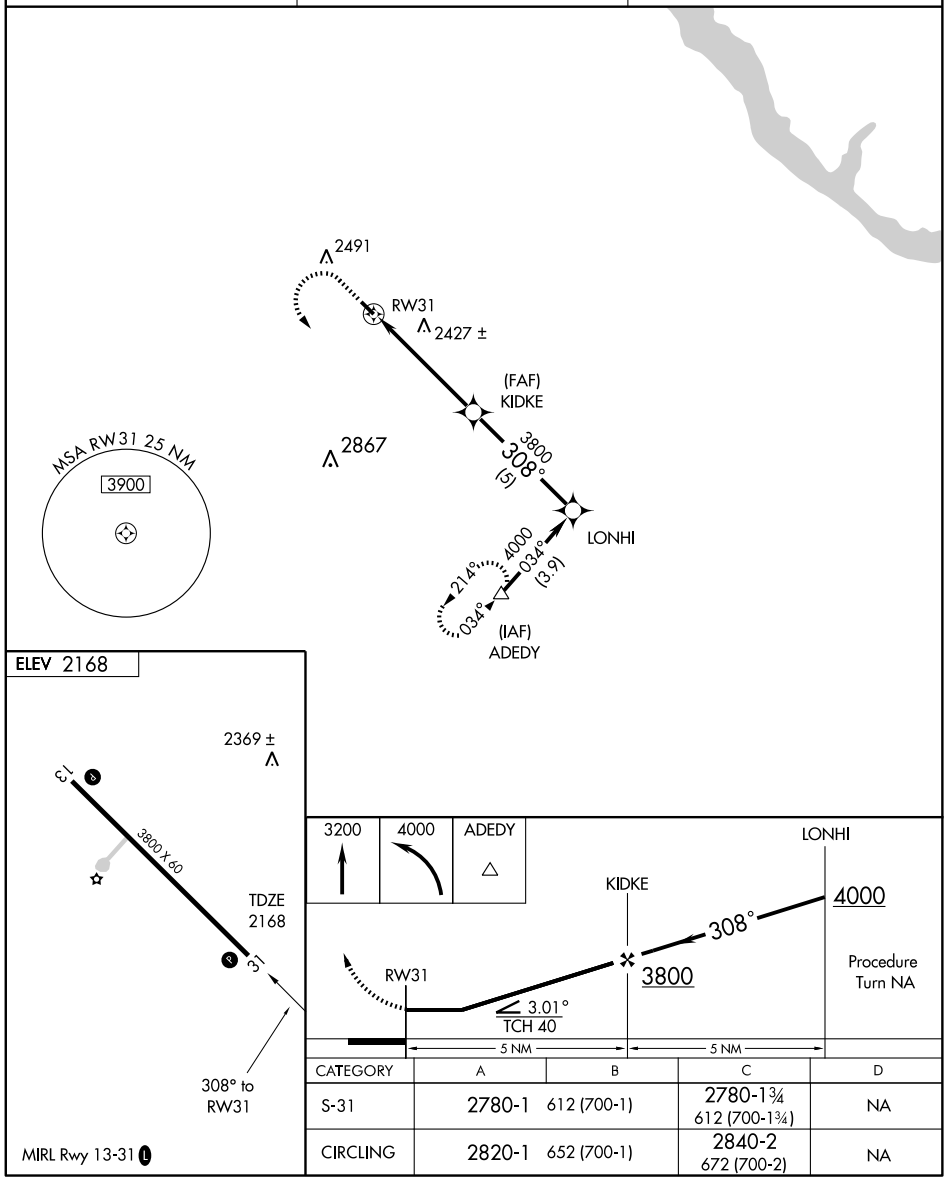
GPS RWY 31
GREGORY MUNI, FLYNN FIELD (9D1)

Use O'Neill altimeter setting.

NA

MISSED APPROACH: Climb to 3200 then climbing left turn to 4000 direct ADEDY and hold.

AWOS-A	HURON RADIO	UNICOM
122.8	122.1R	122.8 (CTAF) L



CATEGORY	A	B	C	D
S-31	2780-1	612 (700-1)	2780-1¾ 612 (700-1¾)	NA
CIRCLING	2820-1	652 (700-1)	2840-2 672 (700-2)	NA

APP CRS	Rwy ldg	4506
192°	TDZE	3144
	Apt Elev	3148

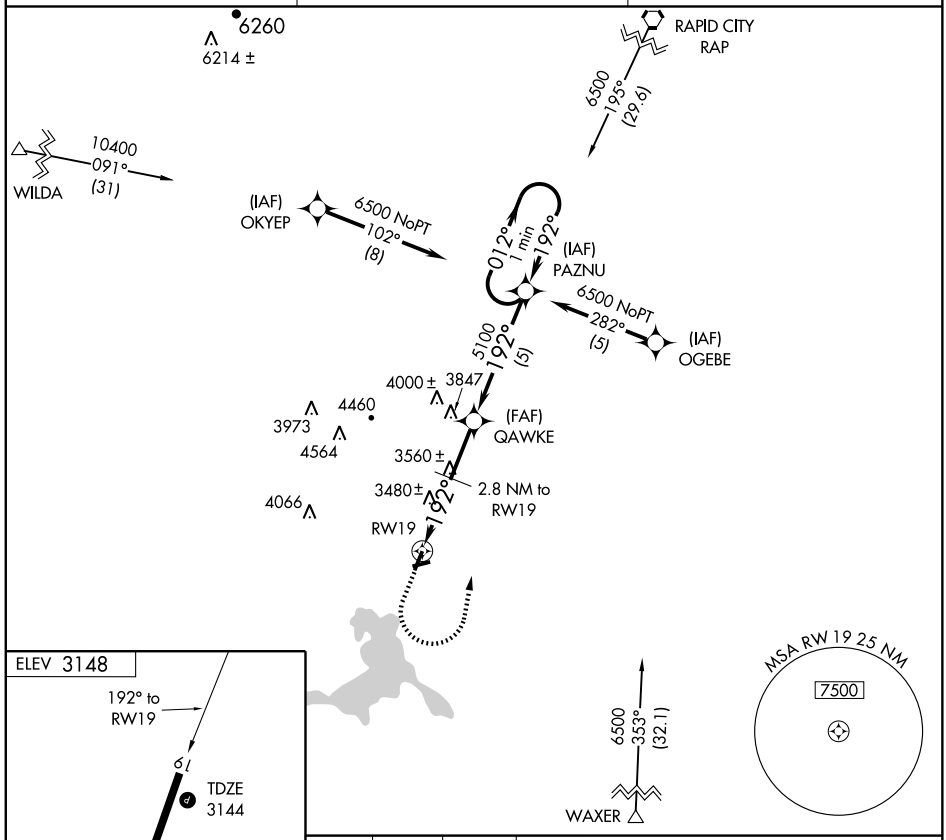
GPS RWY 19
HOT SPRINGS MUNI (HSR)

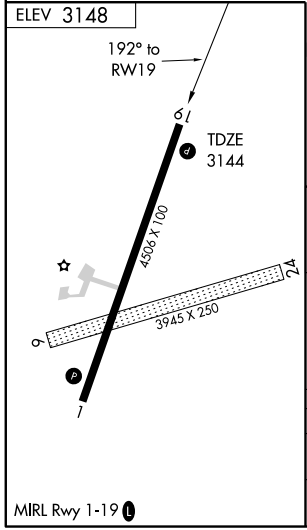
NA

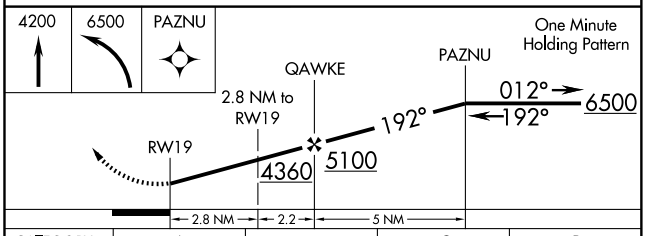
Use Rapid City Rgnl altimeter setting.

MISSED APPROACH: Climb to 4200 then climbing left turn to 6500 direct PAZNU WPT and hold.

AWOS-A	DENVER CENTER	UNICOM
122.8	127.95 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-19	3840-1 696 (700-1)		3840-2 696 (700-2)	3840-2¼ 696 (700-2¼)
CIRCLING	3840-1 692 (700-1)		3840-2 692 (700-2)	3900-2½ 752 (800-2½)

MIRL Rwy 1-19 L

NC-1. 03 JUN 2010 to 01 JUL 2010

LOC/DME I-HON 110.3 Chan 40	APP CRS 121°	Rwy ldg 7201 TDZE 1289 Apt Elev 1289

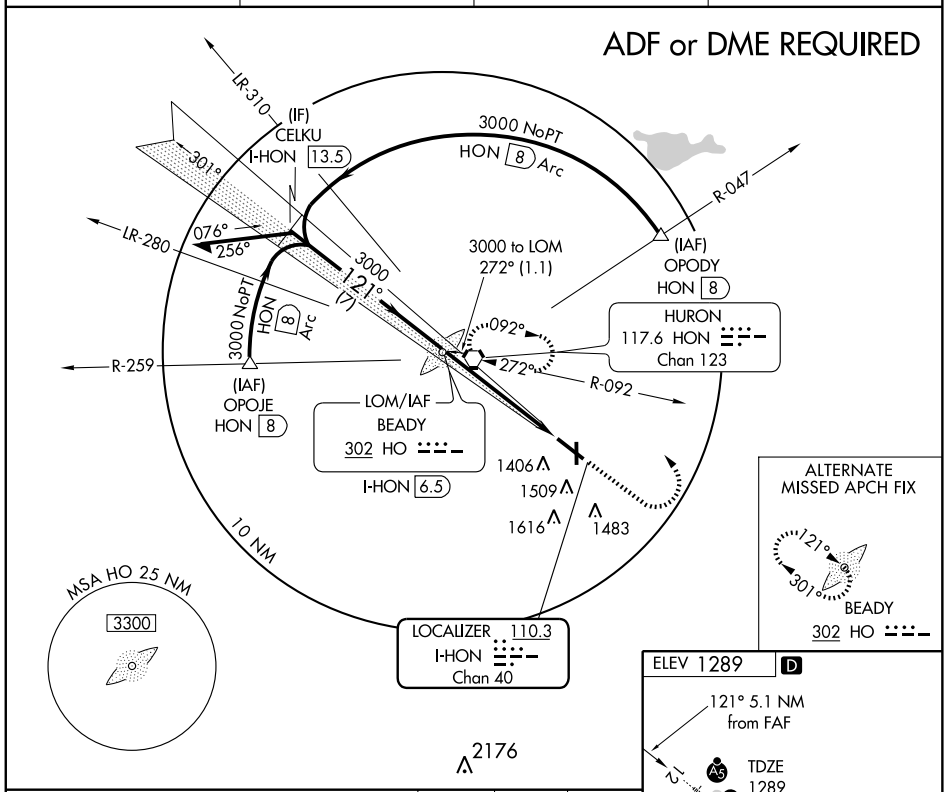
ILS or LOC RWY 12
HURON RGNL (HON)

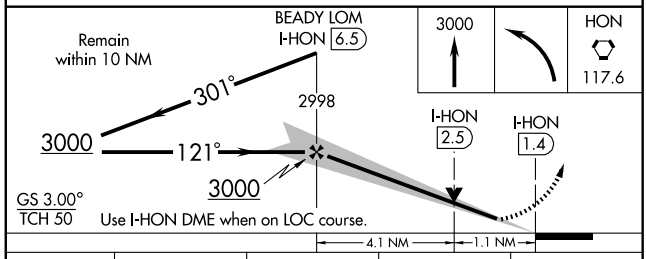
For inoperative MALSR when using Mitchell altimeter setting increase S-ILS 12 all cats visibility to 1 mile. When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all DA 89 feet and all MDA 100 feet, increase S-LOC 12 Cats C and D visibility ¼ mile and Circling Cats C and D ¼ mile. VDP NA when using Mitchell altimeter setting.

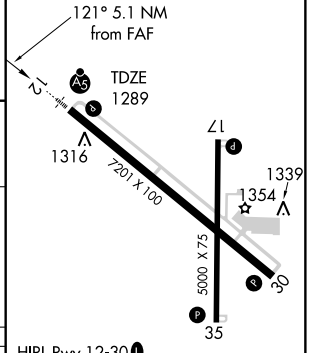
MALSR

MISSED APPROACH: Climb to 3000 then left turn direct HON VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
118.125	126.25 339.8	123.6 (CTAF)	123.0 L







HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 17, 30 and 35 L

CATEGORY	A	B	C	D
S-ILS 12	1489-½ 200 (200-½)			
S-LOC 12	1680-½ 391 (400-½)			1680-¾ 391 (400-¾)
CIRCLING	1820-1 531 (600-1)		1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

FAF to MAP 5.1 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

NC-1. 03 JUN 2010 to 01 JUL 2010

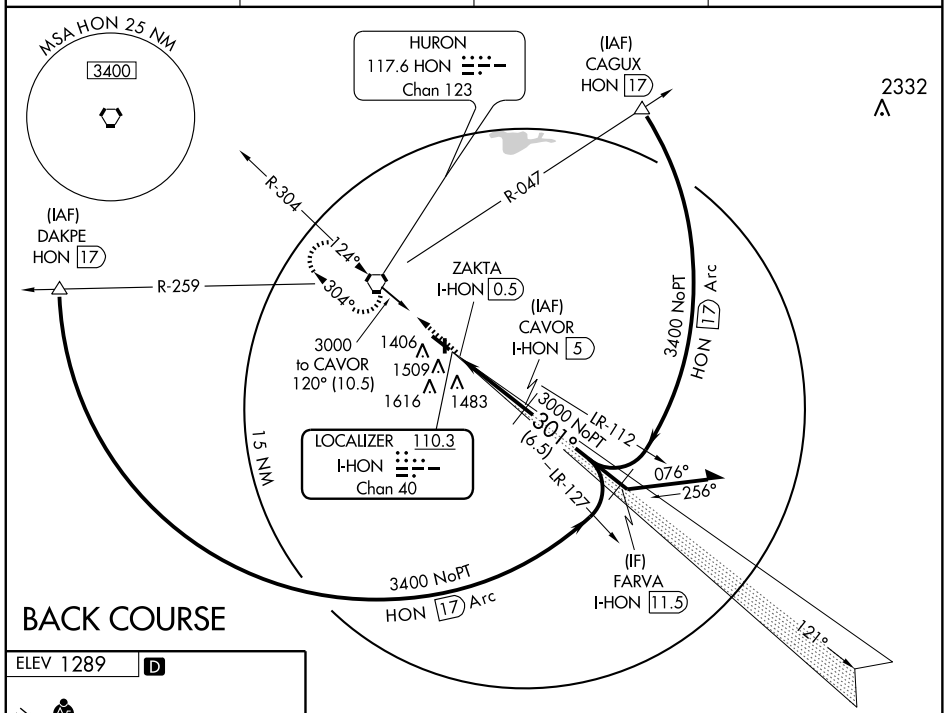
LOC/DME I-HON 110.3 Chan 40	APP CRS 301°	Rwy ldg 7201 TDZE 1286 Apt Elev 1289

LOC/DME BC RWY 30
HURON RGNL (HON)

If local altimeter setting not received, use Mitchell Muni altimeter setting and increase all MDAs 100 feet.

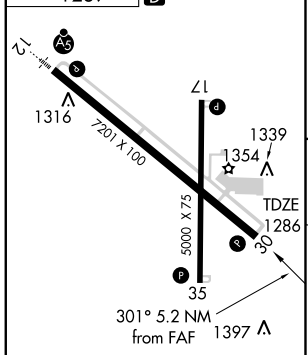
MISSED APPROACH: Climb to 3000 direct HON VORTAC and hold.

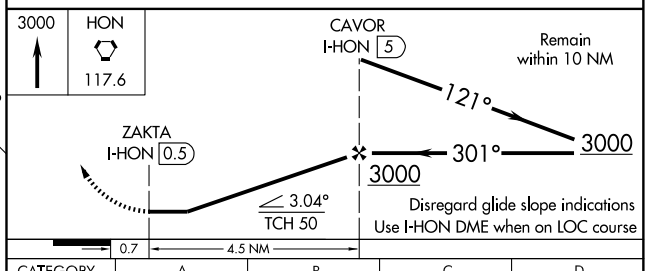
ASOS	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
118.125	126.25 339.8	123.6 (CTAF)	123.0 L



BACK COURSE

DME REQUIRED





CATEGORY	A	B	C	D
S-30	1700-1 414 (500-1)		1700-1¼ 414 (500-1¼)	
CIRCLING	1820-1 531 (600-1)		1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 17, 30 and 35 L

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 70314 W12A	APP CRS 121°	Rwy ldg 7201 TDZE 1289 Apt Elev 1289

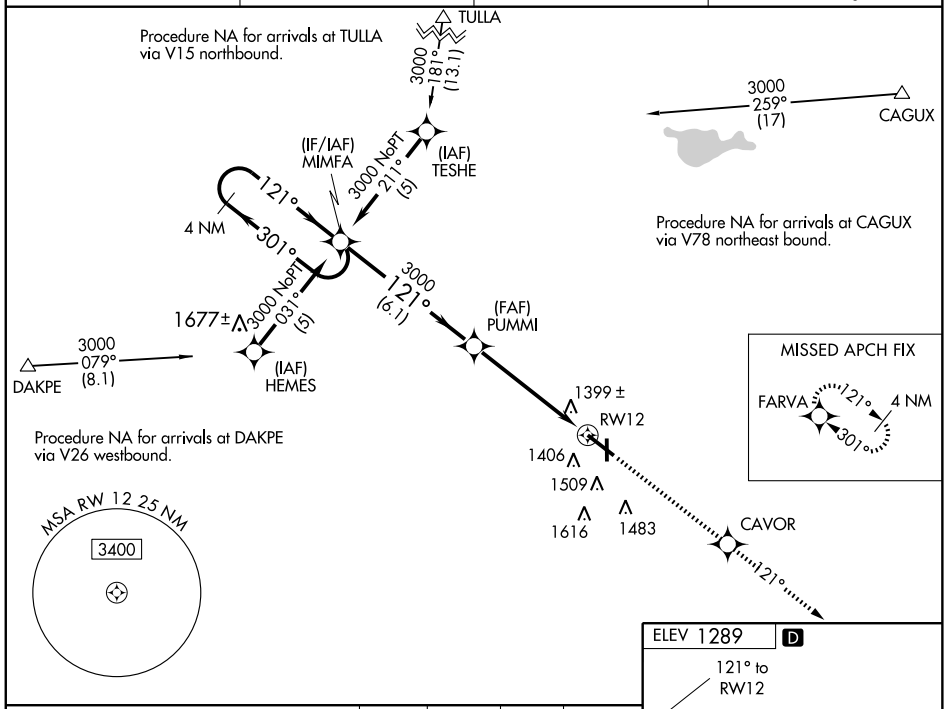
RNAV (GPS) RWY 12
HURON RGNL (HON)

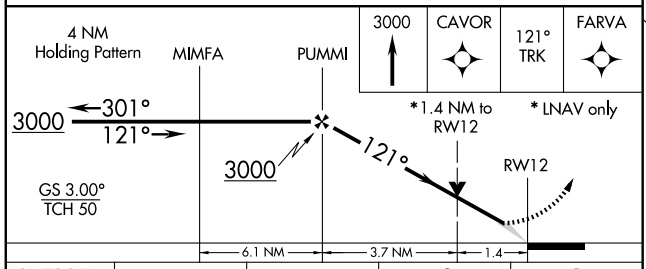
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Mitchell Muni altimeter setting. When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all DA 89 feet and all MDA 100 feet. Increase LNAV/VNAV all Cats, LNAV and Circling Cat C/D visibility ¼ mile. For inoperative MALSR when using Mitchell Muni altimeter setting increase LPV all Cats visibility to 1 mile.

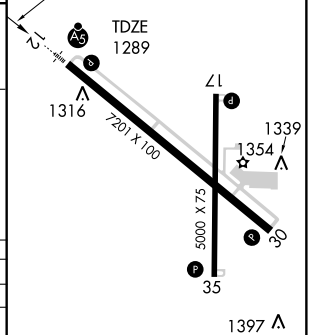
MALSR

MISSED APPROACH: Climb to 3000 direct CAVOR and via 121° track to FARVA and hold.

ASOS	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
118.125	126.25 339.8	123.6 (CTAF)	123.0 L







CATEGORY	A	B	C	D
LPV DA	1489-½ 200 (200-½)			
LNAV/VNAV DA	1699-1 410 (500-1)			1699-1½ 410 (500-1½)
LNAV MDA	1780-½ 491 (500-½)		1780-¾ 491 (500-¾)	1780-1 491 (500-1)
CIRCLING	1820-1 531 (600-1)		1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 17, 30 and 35 L

NC-1. 03 JUN 2010 to 01 JUL 2010

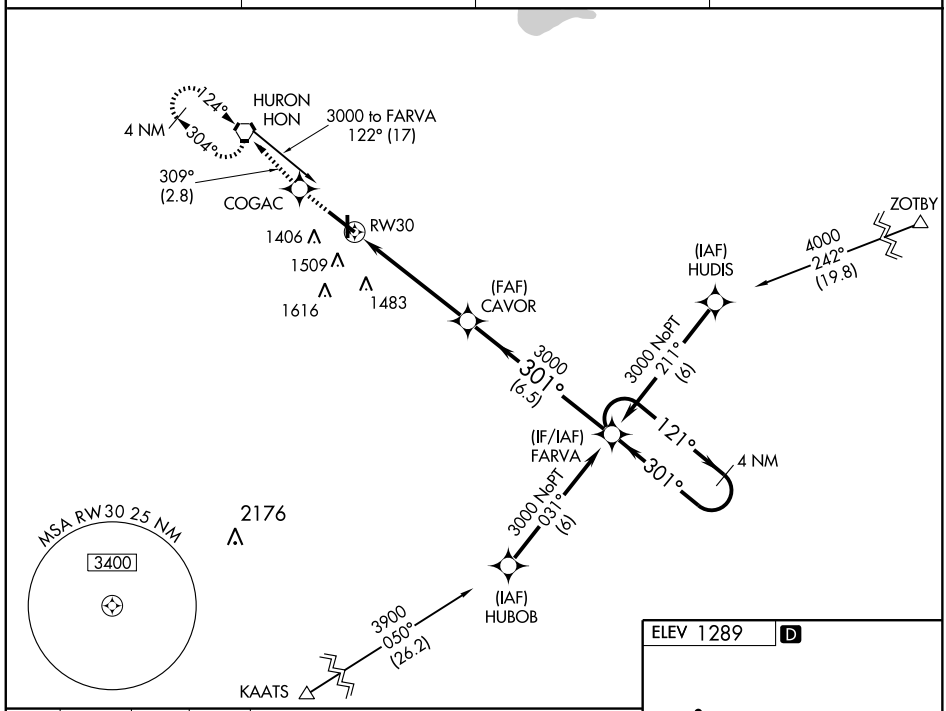
WAAS CH 77514 W30A	APP CRS 301°	Rwy ldg 7201 TDZE 1286 Apt Elev 1289

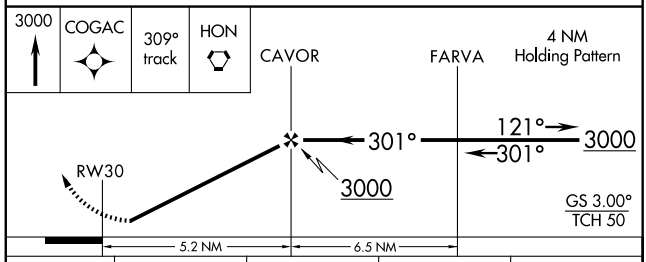
RNAV (GPS) RWY 30
HURON RGNL (HON)

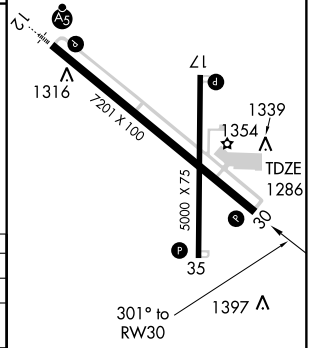
DME/DME RNP - 0.3 NA. When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all DA 89 feet and all MDA 100 feet, increase LPV and LNAV/VNAV all Cats C/D, and Circling Cats C/D visibility ¼ mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV NA when using Mitchell Muni altimeter setting.

MISSED APPROACH: Climb to 3000 direct COGAC and via 309° track to HON VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
118.125	126.25 339.8	123.6 (CTAF)	123.0 L







CATEGORY	A	B	C	D
LPV DA	1559-1 273 (300-1)			
LNAV/VNAV DA	1721-1½ 435 (500-1½)			
LNAV MDA	1760-1 474 (500-1)		1760-1¼ 474 (500-1¼)	1760-1½ 474 (500-1½)
CIRCLING	1820-1 531 (600-1)		1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 17, 30 and 35 L

NC-1. 03 JUN 2010 to 01 JUL 2010

VORTAC HON 117.6 Chan 123	APP CRS 124°	Rwy ldg 7201 TDZE 1289 Apt Elev 1289

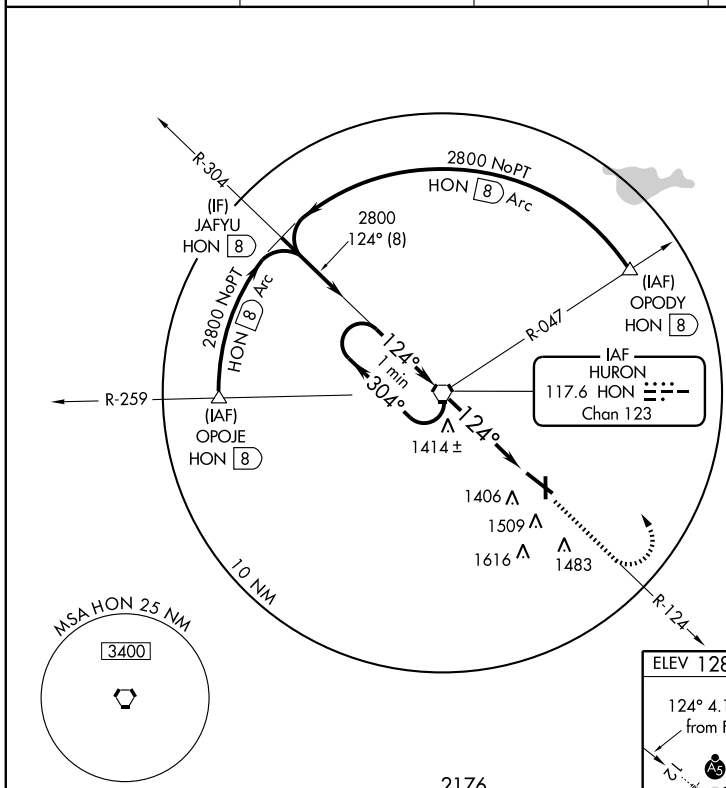
VOR RWY 12
HURON RGNL (HON)

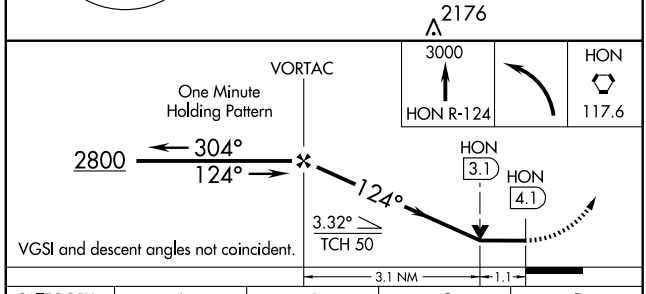
When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all MDA 100 feet, increase S-12 Cat C visibility ¼ mile and circling Cats C and D ¼ mile. For inoperative MALSR increase S-12 Cat D visibility 1¼ mile. VDP NA when using Mitchell Muni altimeter setting.

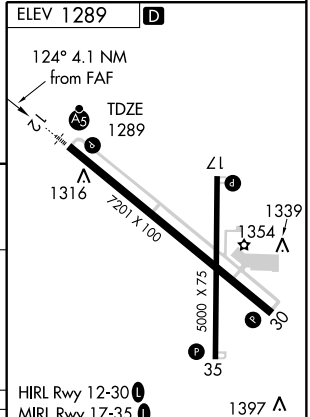
MALSR

MISSED APPROACH: Climb to 3000 via HON VORTAC R-124 then left turn direct HON VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
118.125	126.25 339.8	123.6 (CTAF)	123.0 L







CATEGORY	A	B	C	D
S-12	1680-½ 391 (400-½)			1680-1 391 (400-1)
CIRCLING	1820-1 531 (600-1)		1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS		
296°	Rwy ldg	4501
	TDZE	2571
	Apt Elev	2571

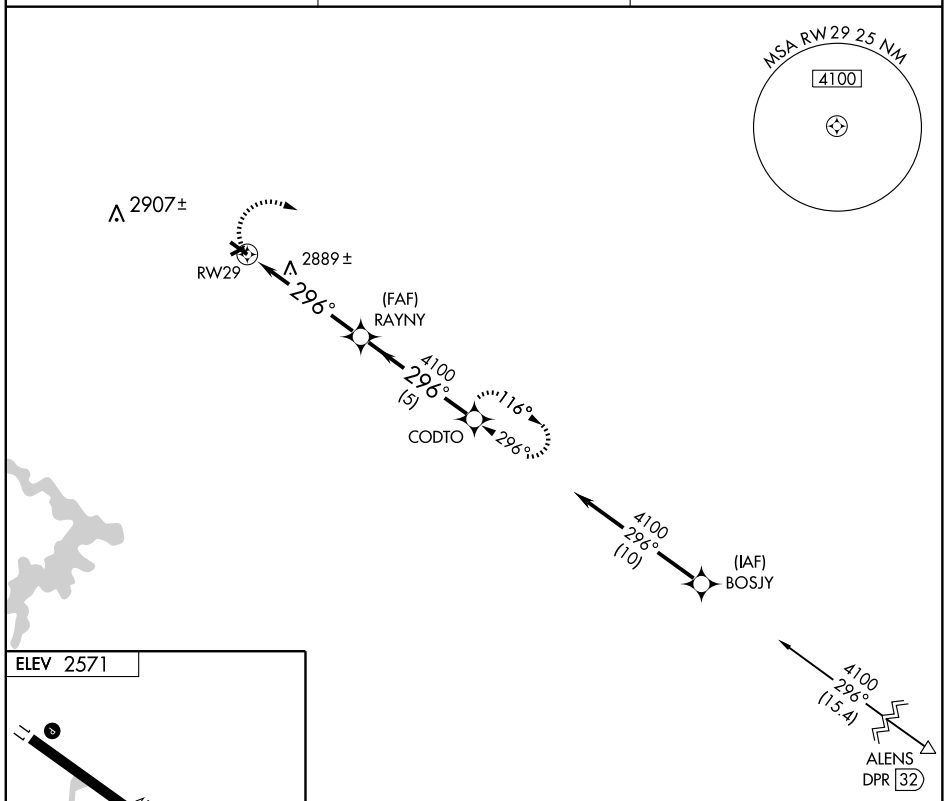
GPS RWY 29
LEMMON MUNI (LEM)

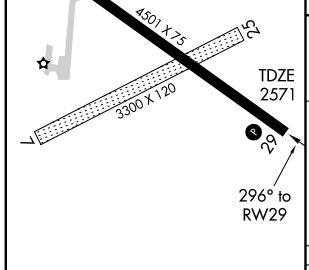
NA

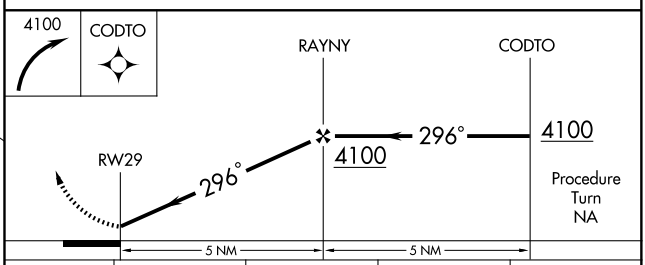
Use Hettinger altimeter setting.

MISSED APPROACH: Climbing right turn to 4100 direct CODTO and hold.

AWOS-A	MINNEAPOLIS CENTER	UNICOM
122.8	124.25 380.3	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-29	3220-1	649 (700-1)	3220-1¾ 649 (700-1¾)	3220-2 649 (700-2)
CIRCLING	3220-1	649 (700-1)	3280-2 709 (800-2)	3280-2¼ 709 (800-2¼)

MIRL Rwy 11-29 L

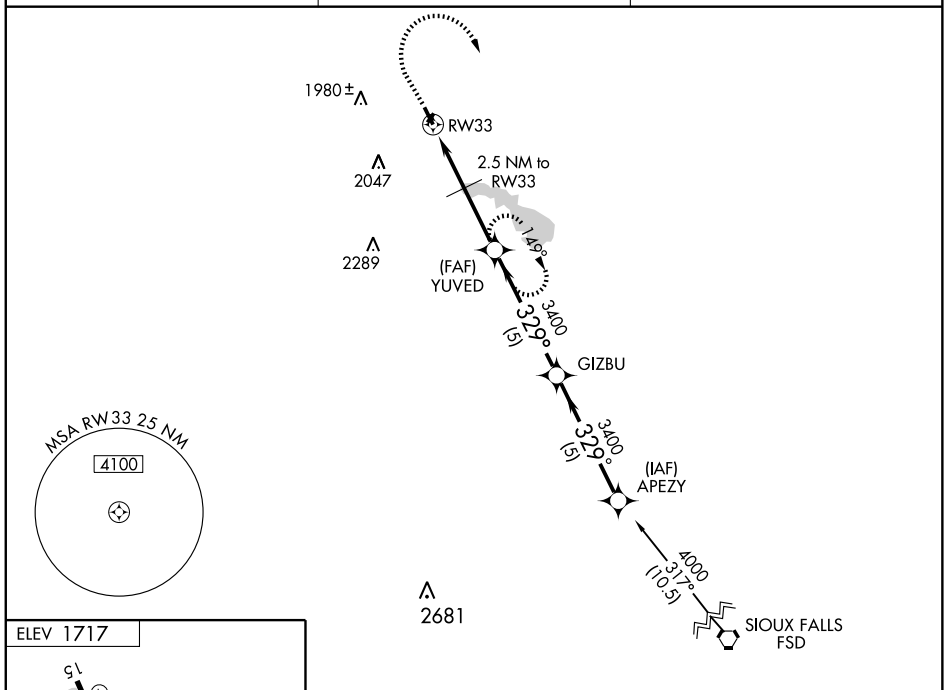
APP CRS	Rwy ldg	5000
329°	TDZE	1714
	Apt Elev	1717

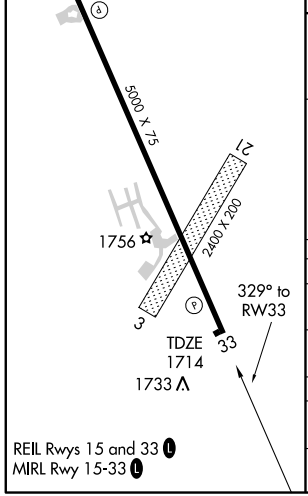
GPS RWY 33
MADISON MUNI (MDS)

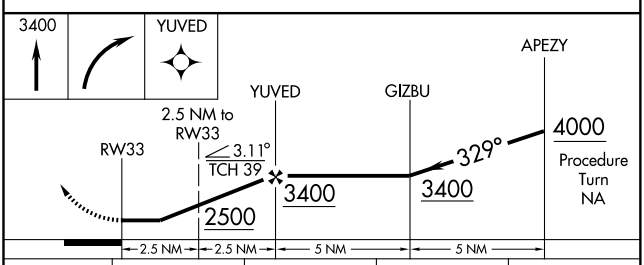
NA Category D Circling not authorized west of Rwy 15-33. Obtain local altimeter setting on CTAF; when not received, use Brookings altimeter setting.

MISSED APPROACH: Climb to 3400 then right turn direct YUVED WP and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.35	**132.05 317.4**	**122.8** (CTAF) L







CATEGORY	A	B	C	D
S-33	2140-1 426 (500-1)		2140-1¼ 426 (500-1¼)	
CIRCLING	2220-1 503 (600-1)		2220-1½ 503 (600-1½)	2280-2 563 (600-2)
BROOKINGS ALTIMETER SETTING MINIMUMS				
S-33	2200-1 486 (500-1)		2200-1¼ 486 (500-1¼)	2200-1½ 486 (500-1½)
CIRCLING	2280-1 563 (600-1)		2280-1½ 563 (600-1½)	2280-2 563 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

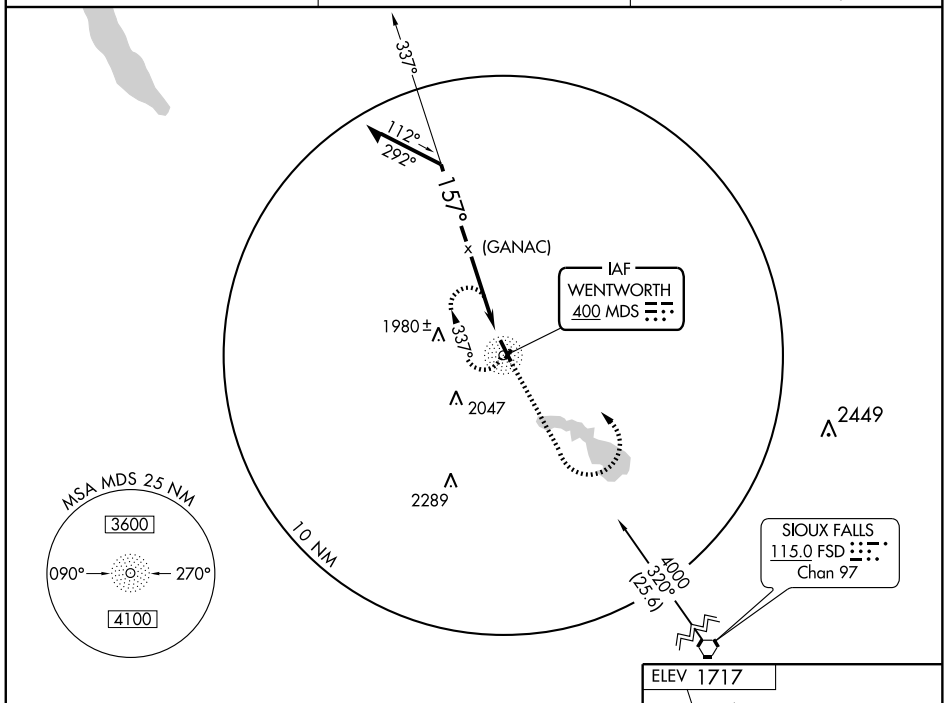
NDB MDS	APP CRS	Rwy ldg	5000
400	157°	TDZE	1717
		Apt Elev	1717

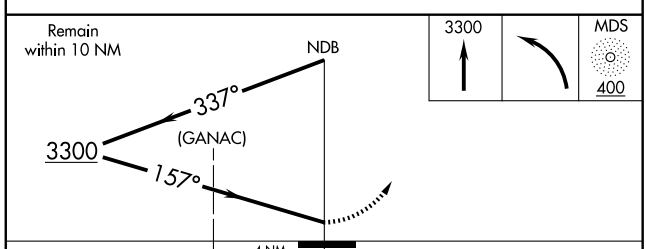
NDB or GPS RWY 15
MADISON MUNI (MDS)

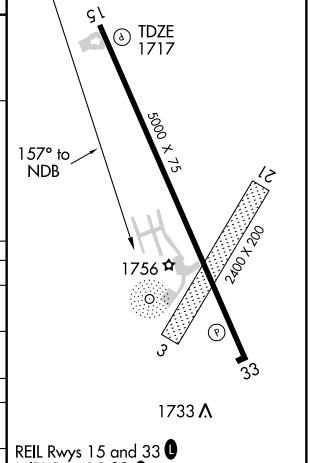
NA Category D Circling not authorized west of Rwy 15-33. Obtain local altimeter setting on CTAF; when not received, use Brookings altimeter setting.

MISSED APPROACH: Climb to 3300 then left turn direct MDS NDB and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.35	132.05 317.4	122.8 (CTAF) L







REIL Rwys 15 and 33 L
MIRL Rwy 15-33 L

CATEGORY	A	B	C	D
S-15	2280-1	563 (600-1)	2280-1½ 563 (600-1½)	2280-1¾ 563 (600-1¾)
CIRCLING	2280-1	563 (600-1)	2280-1½ 563 (600-1½)	2280-2 563 (600-2)
BROOKINGS ALTIMETER SETTING MINIMUMS				
S-15	2340-1	623 (700-1)	2340-1¾ 623 (700-1¾)	2340-2 623 (700-2)
CIRCLING	2340-1	623 (700-1)	2340-1¾ 623 (700-1¾)	2340-2 623 (700-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS		
317°	Rwy ldg	3709
	TDZE	3293
	Apt Elev	3293

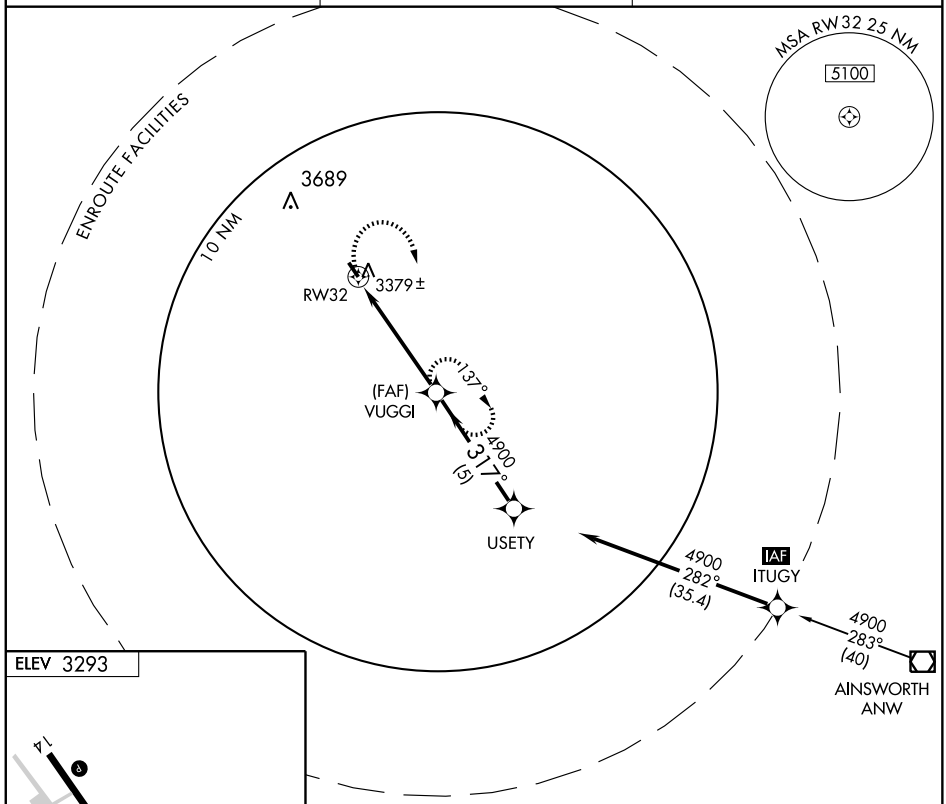
GPS RWY 32
MARTIN MUNI (9V6)

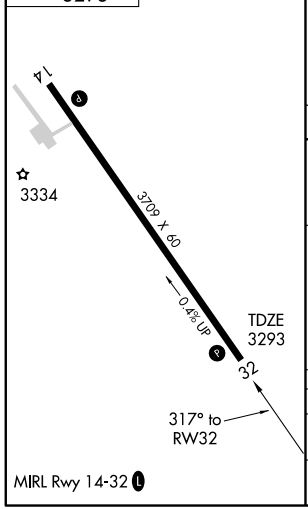
NA

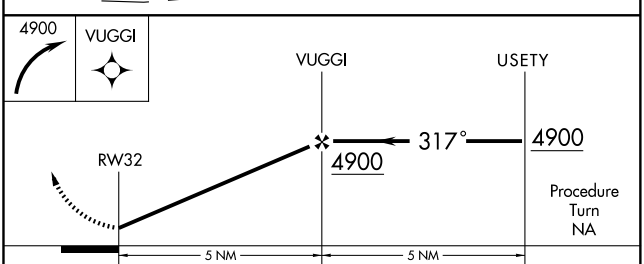
Use Pine Ridge, SD altimeter setting.
IAF ARM APPROACH MODE PRIOR TO IAF.

MISSED APPROACH: Climbing right turn to 4900 direct VUGGI WP and hold.

DENVER CENTER	UNICOM	
127.95 338.2	123.0 (CTAF)	122.9 L







CATEGORY	A	B	C	D
S-32	3780-1 487 (500-1)		3780-1¼ 487 (500-1¼)	NA
CIRCLING	3940-1 647 (700-1)		3940-1¾ 647 (700-1¾)	NA

NC-1. 03 JUN 2010 to 01 JUL 2010

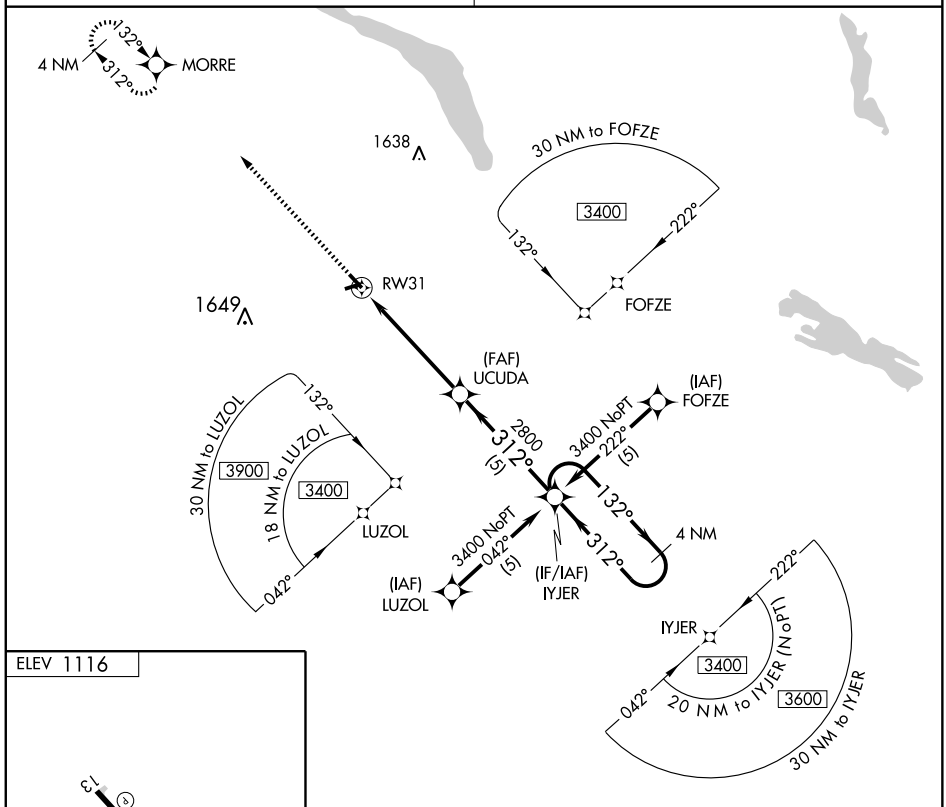
APP CRS	Rwy ldg	4000
312°	TDZE	1114
	Apt Elev	1116

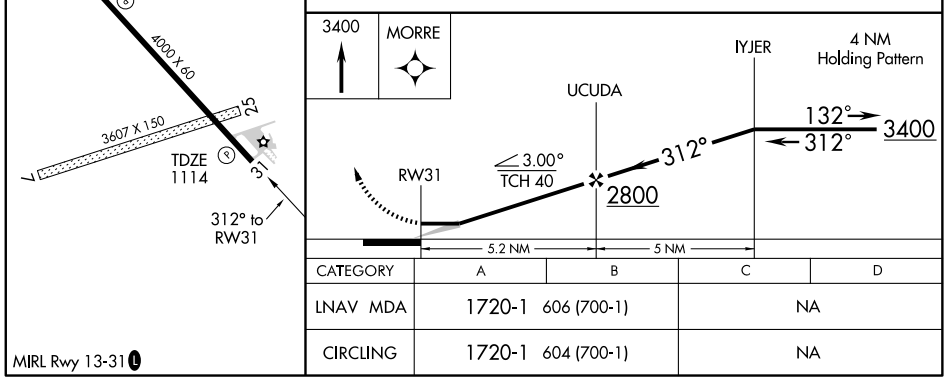
RNAV (GPS) RWY 31
MILBANK MUNI (1D1)

Use Watertown Muni, SD altimeter setting.
NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3400 direct MORRE WP and hold.

MINNEAPOLIS CENTER	UNICOM
128.5 306.2	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1720-1 606 (700-1)		NA	
CIRCLING	1720-1 604 (700-1)		NA	

MIRL Rwy 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	3600
151°	TDZE	1567
	Apt Elev	1569

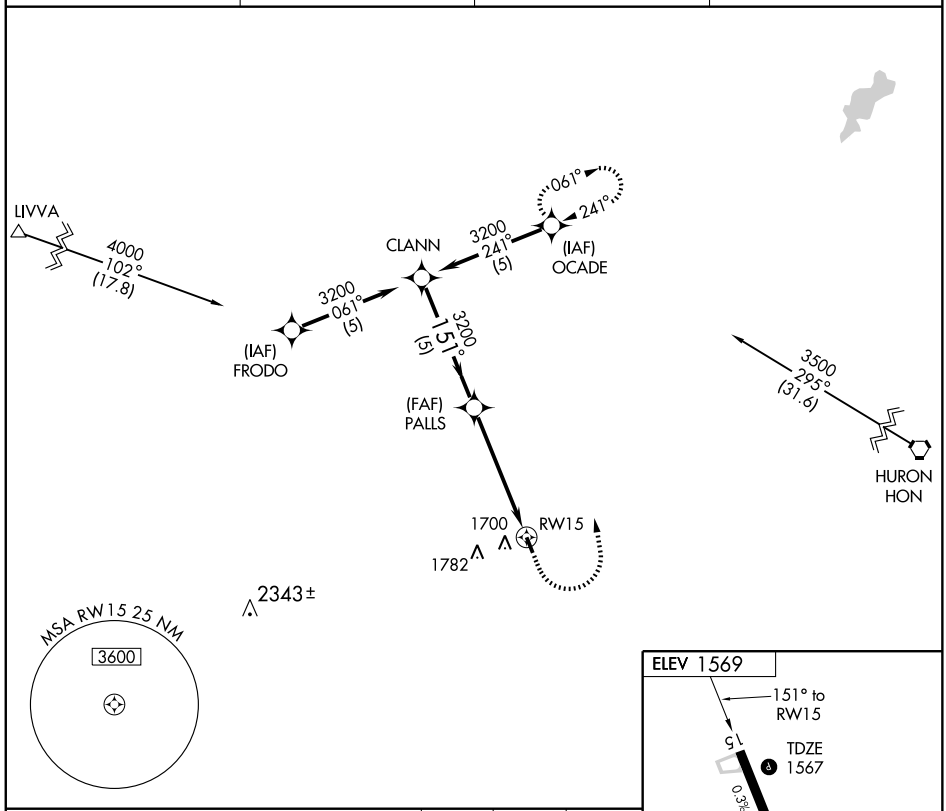
GPS RWY 15
MILLER MUNI (MKA)

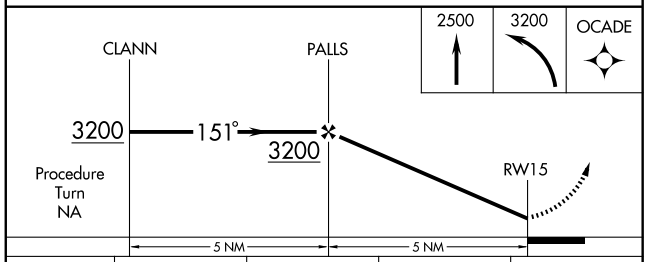
NA

Use Huron altimeter setting.

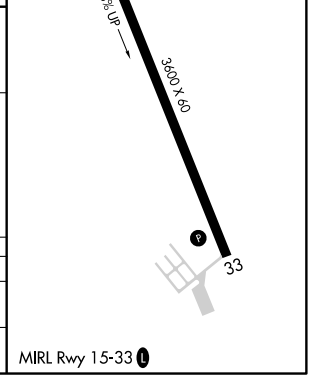
MISSED APPROACH: Climb to 2500 then climbing left turn to 3200 direct OCADE WP and hold.

AWOS-A	MINNEAPOLIS CENTER	CTAF	122.8 L
122.9	125.1 269.1	122.9	





CATEGORY	A	B	C	D
S-15	2040-1 473 (500-1)		NA	
CIRCLING	2180-1 611 (700-1)	2220-1 651 (700-1)	NA	



NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	3600
331°	TDZE	1569
	Apt Elev	1569

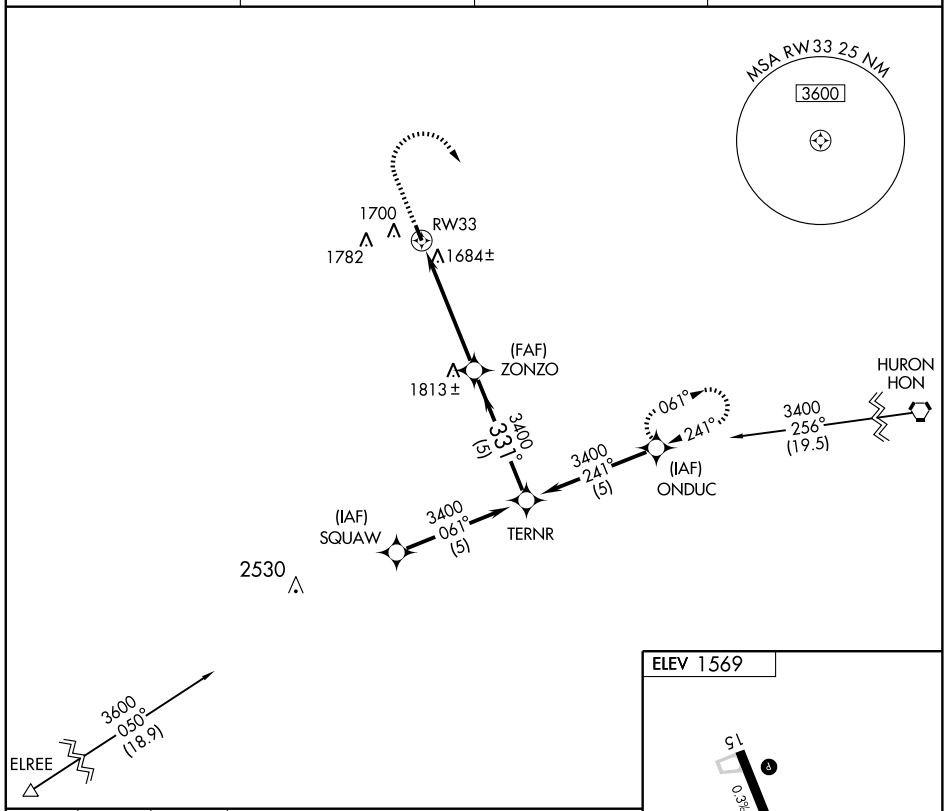
GPS RWY 33
MILLER MUNI (MKA)

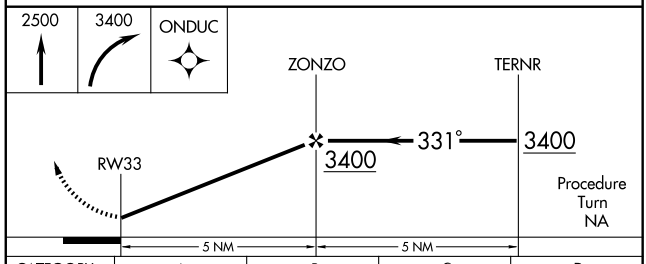
NA

Use Huron altimeter setting.

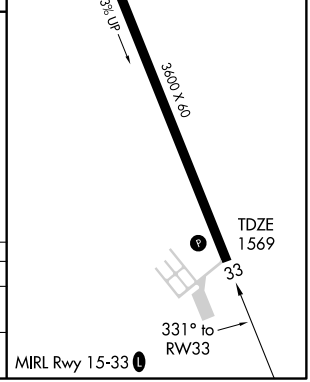
MISSED APPROACH: Climb to 2500 then climbing right turn to 3400 direct ONDUC WP and hold.

AWOS-A	MINNEAPOLIS CENTER	CTAF	122.8 L
122.9	125.1 269.1	122.9	





CATEGORY	A	B	C	D
S-33	2060-1 491 (500-1)		NA	
CIRCLING	2180-1 611 (700-1)	2220-1 651 (700-1)	NA	



NC-1. 03 JUN 2010 to 01 JUL 2010

LOC I-LPA	APP CRS	Rwy ldg	6700
109.7	307°	TDZE	1304
		Apt Elev	1304

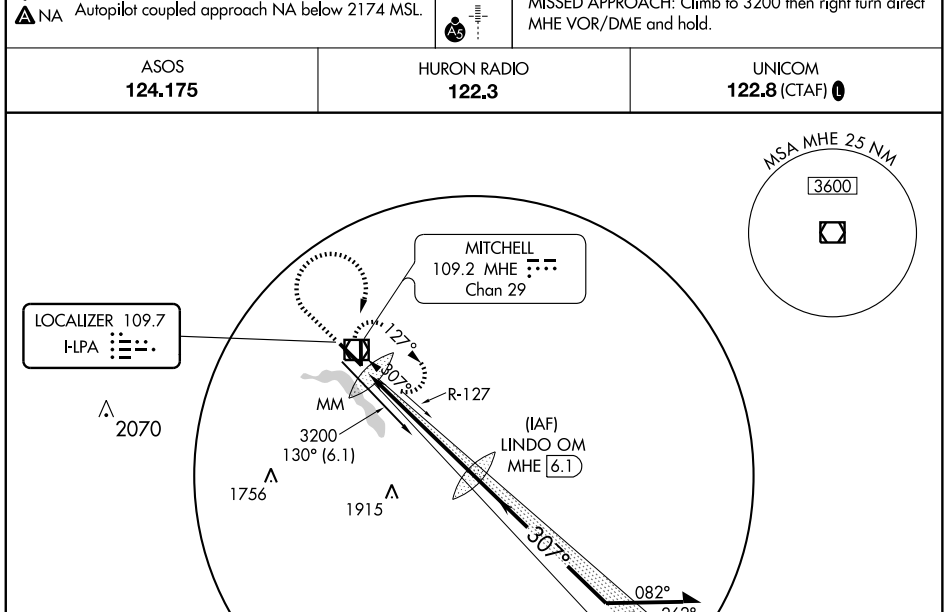
ILS or LOC RWY 30
MITCHELL MUNI (MHE)

NA Autopilot coupled approach NA below 2174 MSL.

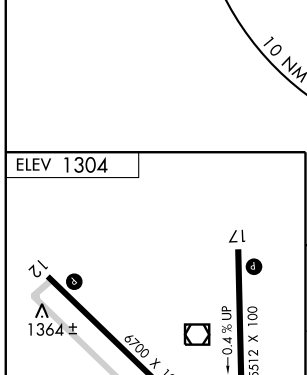
MALSR

MISSED APPROACH: Climb to 3200 then right turn direct MHE VOR/DME and hold.

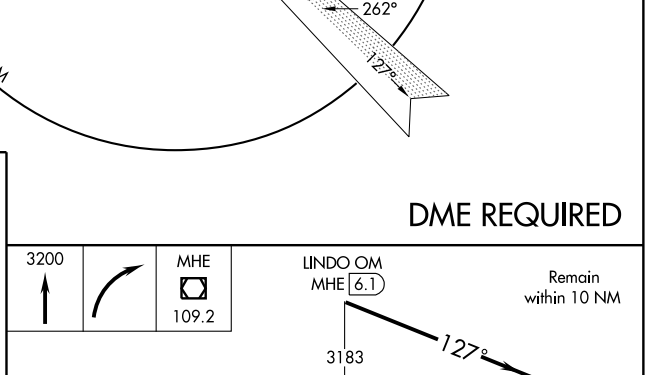
ASOS	HURON RADIO	UNICOM
124.175	122.3	122.8 (CTAF)



DME REQUIRED



FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52



CATEGORY	A	B	C	D
S-ILS 30	1504-½ 200 (200-½)			
S-LOC 30	1700-½ 396 (400-½)			1700-¾ 396 (400-¾)
CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1760-1½ 456 (500-1½)	1860-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

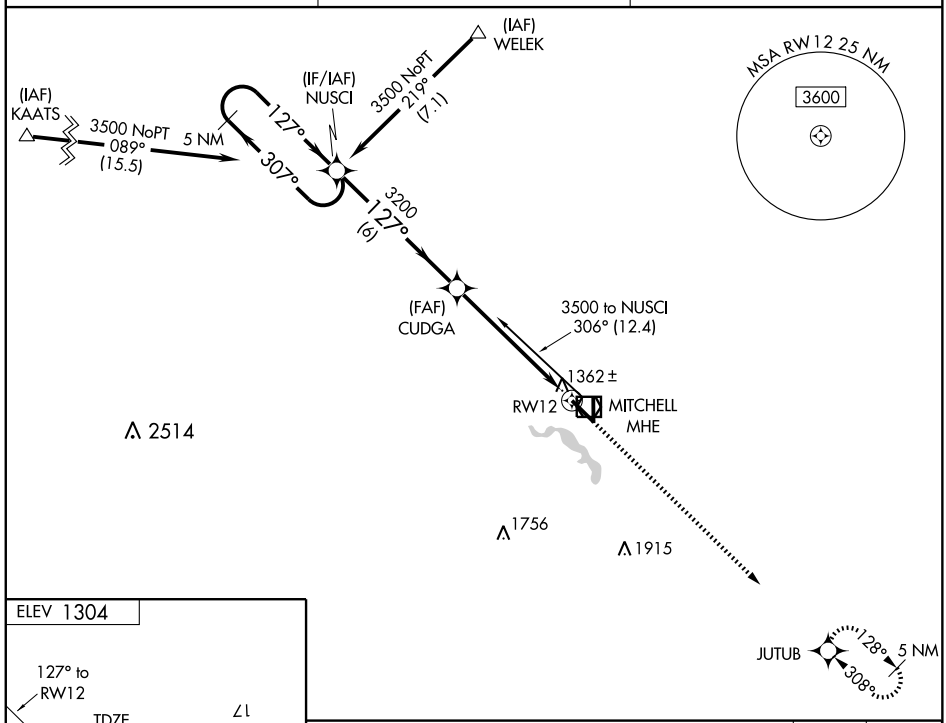
WAAS CH 77900 W12A	APP CRS 127°	Rwy ldg 6700 TDZE 1301 Apt Elev 1304

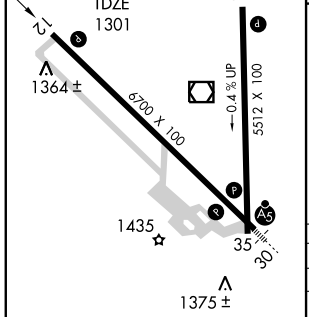
RNAV (GPS) RWY 12
MITCHELL MUNI (MHE)

DME/DME RNP-0.3 NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).
VDP and Baro VNAV NA with Huron Rgnl altimeter setting.
If local altimeter setting not received, use Huron Rgnl altimeter setting and increase all DAs/MDAs 100 feet.

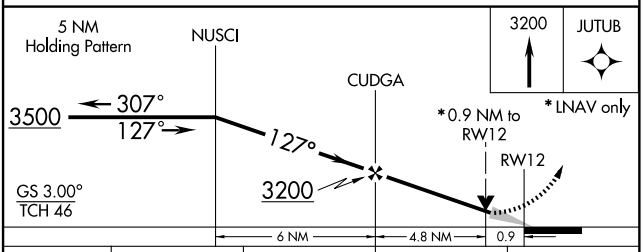
MISSED APPROACH: Climb to 3200 direct JUTUB and hold.

ASOS	HURON RADIO	UNICOM
124.175	122.3	122.8 (CTAF) L





HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 12 and 17 L



CATEGORY	A	B	C	D
LPV DA	1575-1 274 (300-1)			
LNAV/VNAV DA	1627-1¼ 326 (400-1¼)			
LNAV MDA	1620-1 319 (400-1)			
CIRCLING	1740-1¼ 436 (500-1¼)	1760-1¼ 456 (500-1¼)	1760-1½ 456 (500-1½)	1860-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 70700 W30A	APP CRS 307°	Rwy ldg 6700 TDZE 1304 Apt Elev 1304

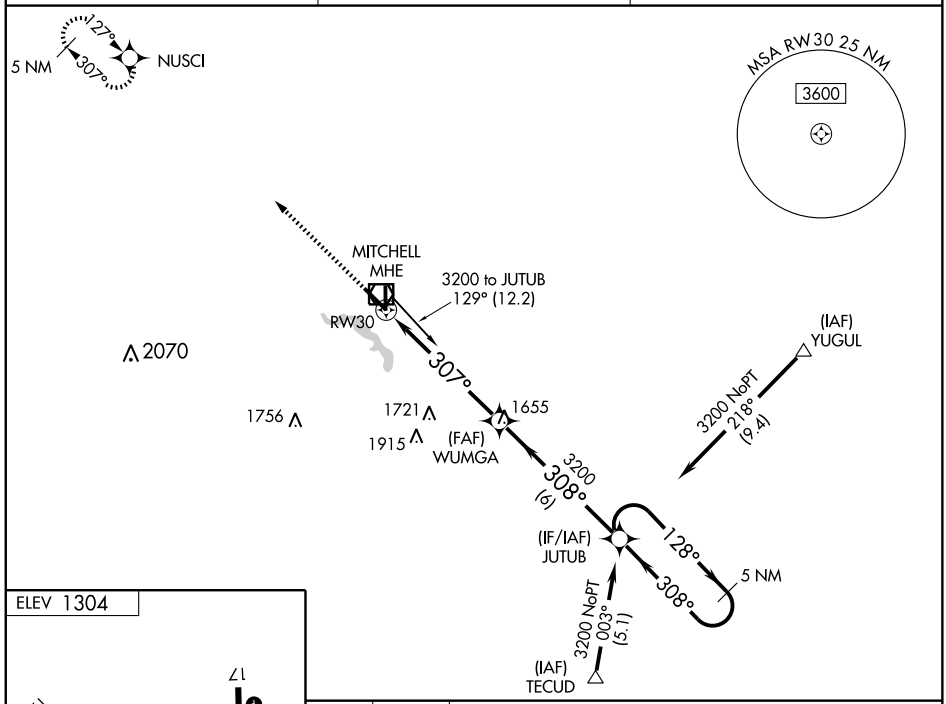
RNAV (GPS) RWY 30
MITCHELL MUNI (MHE)

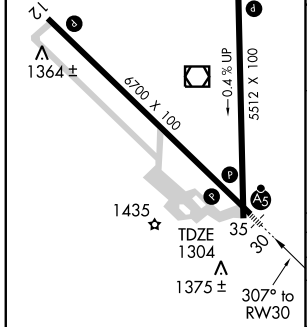
If local altimeter setting not received, use Huron Rgnl altimeter setting and increase all DAs/MDAs 100 feet.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).
For inoperative MALSR, increase LPV all Cats. visibility to ¾, and LNAV/VNAV Cat. D to 1. DME/DME RNP- 0.3 NA.
VDP and Baro-VNAV NA with Huron Rgnl altimeter setting.

MALSR

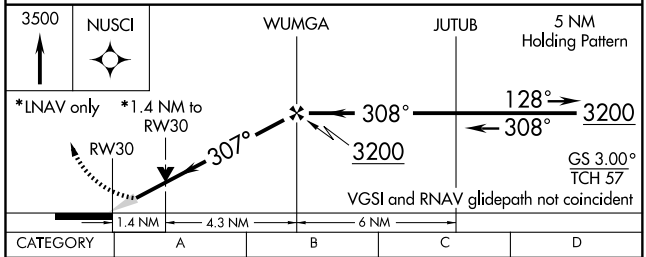
MISSED APPROACH: Climb to 3500 direct NUSCI and hold.

ASOS	HURON RADIO	UNICOM
124.175	122.3	122.8 (CTAF) L





HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 12 and 17 L



CATEGORY	A	B	C	D
LPV DA	1554-½ 250 (300-½)			
LNAV/VNAV DA	1625-½ 321 (400-½)			1625-¾ 321 (400-¾)
LNAV MDA	1800-½ 496 (500-½)		1800-¾ 496 (500-¾)	1800-1 496 (500-1)
CIRCLING	1800-1 496 (500-1)		1800-1½ 496 (500-1½)	1860-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

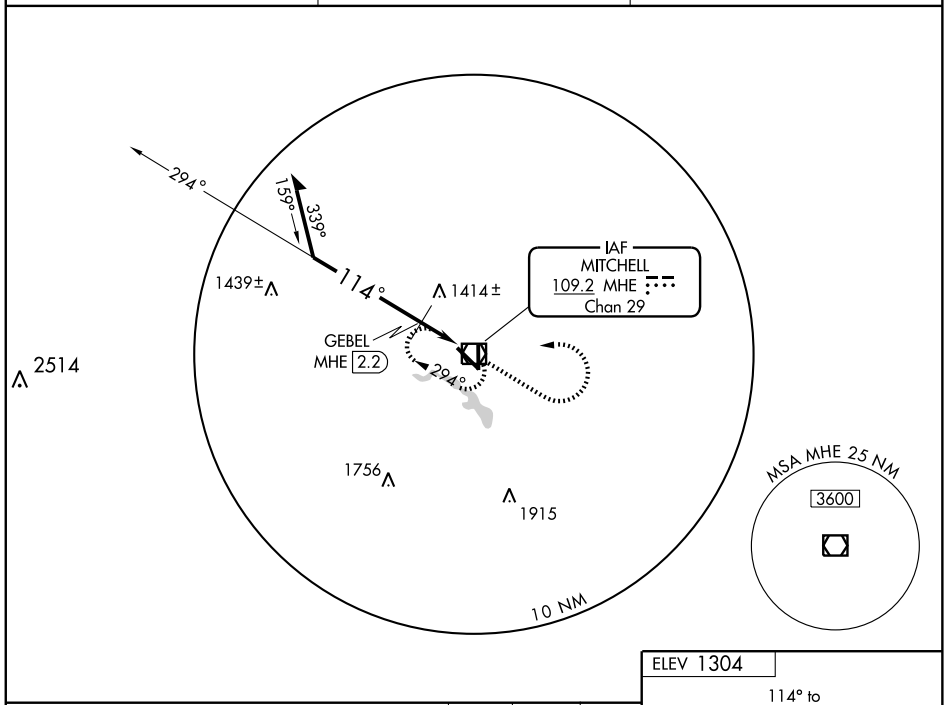
VOR/DME MHE	APP CRS	Rwy ldg	6700
109.2	114°	TDZE	1301
Chan 29		Apt Elev	1304

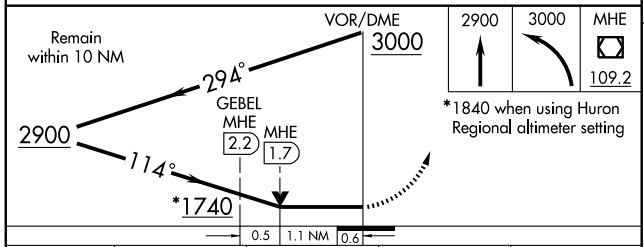
VOR RWY 12
MITCHELL MUNI (MHE)

If local altimeter setting not received, use Huron Rgnl altimeter setting and increase all MDAs 100 feet.
VDP NA when using Huron Rgnl altimeter setting.

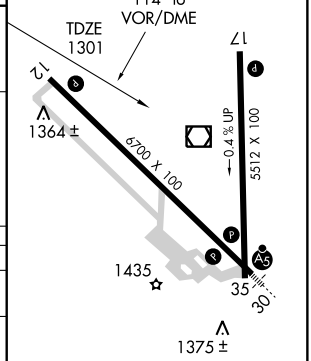
MISSED APPROACH: Climb to 2900 then climbing left turn to 3000 direct MHE VOR/DME and hold.

ASOS	HURON RADIO	UNICOM
124.175	122.3	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-12	1740-1 439 (500-1)		1740-1¼ 439 (500-1¼)	1740-1½ 439 (500-1½)
CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1760-1½ 456 (500-1½)	1860-2 556 (600-2)
GEBEL FIX MINIMUMS				
S-12	1680-1 379 (400-1)			1680-1¼ 379 (400-1¼)
CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1760-1½ 456 (500-1½)	1860-2 556 (600-2)



HIRL Rwy 12-30 L
MIRL Rwy 17-35 L
REIL Rwys 12 and 17 L

NC-1. 03 JUN 2010 to 01 JUL 2010

VOR/DME MHE	APP CRS	Rwy ldg	6700
109.2	322°	TDZE	1304
Chan 29		Apt Elev	1304

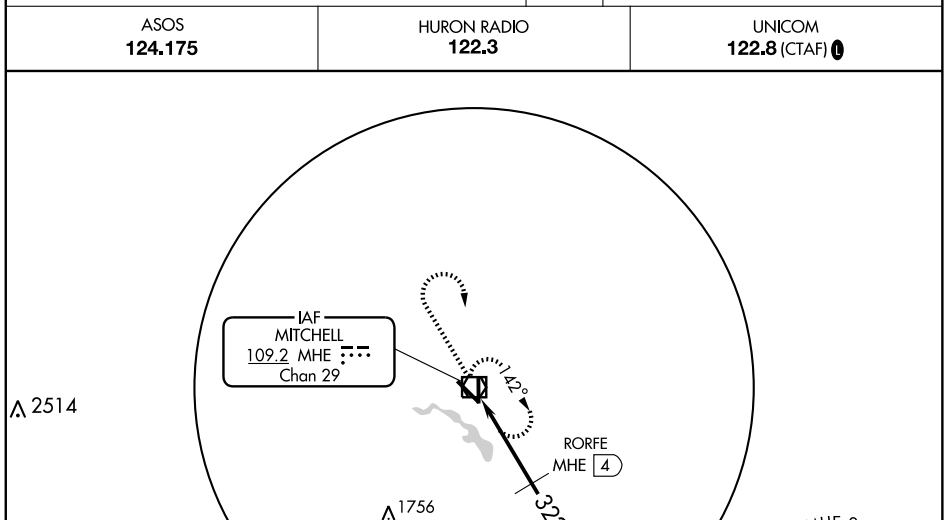
VOR RWY 30
MITCHELL MUNI (MHE)

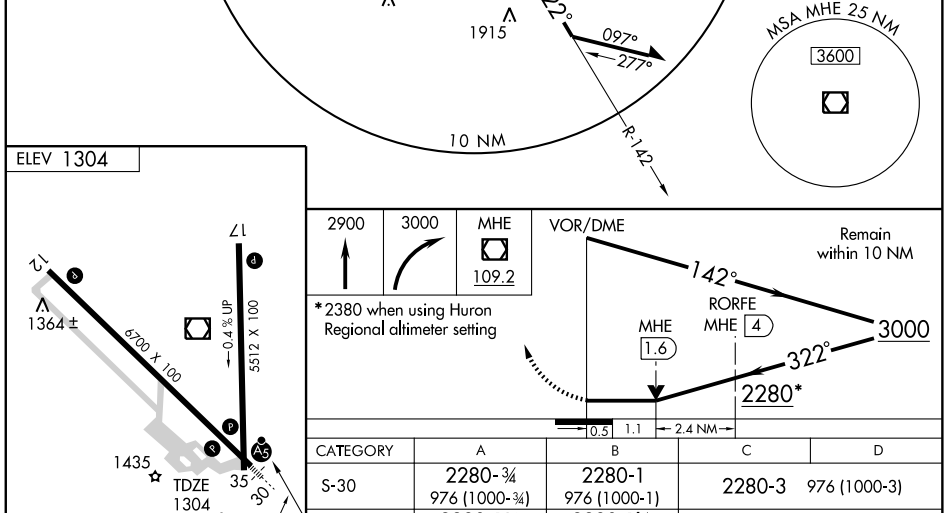
If local altimeter setting not received, use Huron Rgnl altimeter setting and increase all MDAs 100 feet.
VOR MINIMUMS: Inoperative table does not apply to S-30 Cats. C and D. RORFE FIX MINIMUMS: For inoperative MALSR, increase S-30 Cat. D visibility to 1¼ mile.
VDP NA when using Huron Rgnl altimeter setting.

MALSR

MISSED APPROACH: Climb to 2900 then climbing right turn to 3000 direct MHE VOR/DME and hold.

ASOS	HURON RADIO	UNICOM
124.175	122.3	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-30	2280-¾ 976 (1000-¾)	2280-1 976 (1000-1)	2280-3 976 (1000-3)	
CIRCLING	2280-1¼ 976 (1000-1¼)	2280-1½ 976 (1000-1½)	2280-3 976 (1000-3)	
RORFE FIX MINIMUMS				
S-30	1700-½ 396 (400-½)			1700-1 396 (400-1)
CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1760-1½ 456 (500-1½)	1860-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

NDB RVB	APP CRS	Rwy ldg	4411
407	108°	TDZE	1703
		Apt Elev	1715

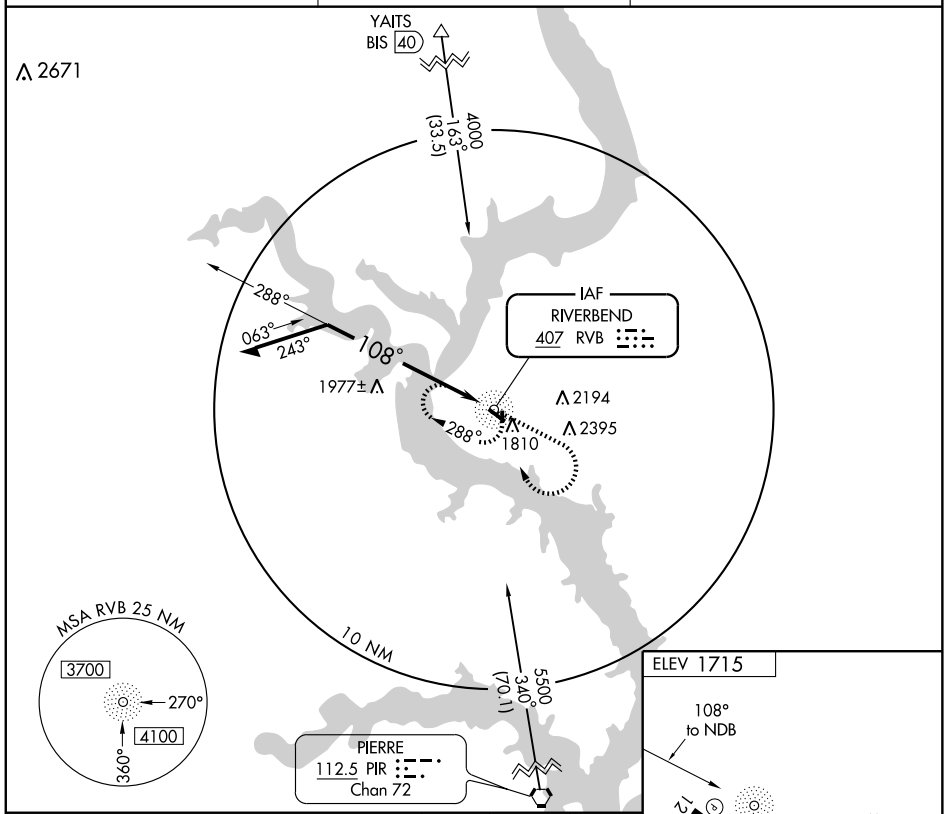
NDB RWY 12
MOBRIDGE MUNI (MBG)

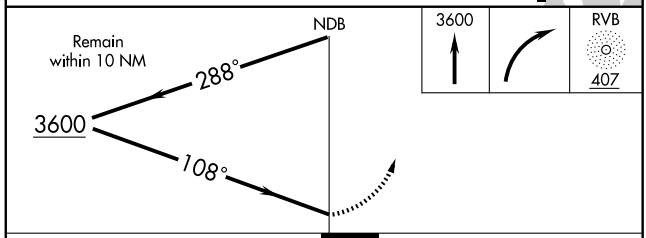
If local altimeter setting not received, use Pierre Rgnl altimeter setting and increase all MDAs 180 feet.

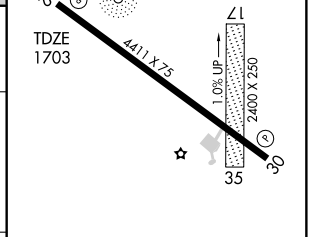
NA

MISSED APPROACH: Climb to 3600 then right turn direct RVB NDB and hold.

ASOS	HURON RADIO	UNICOM
121.425	122.35	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-12	2340-1	637 (700-1)	2340-1¾ 637 (700-1¾)	2340-2 637 (700-2)
CIRCLING	2360-1	645 (700-1)	2360-1¾ 645 (700-1¾)	2560-2¾ 845 (900-2¾)

MIRL Rwy 12-30 L

NC-1. 03 JUN 2010 to 01 JUL 2010

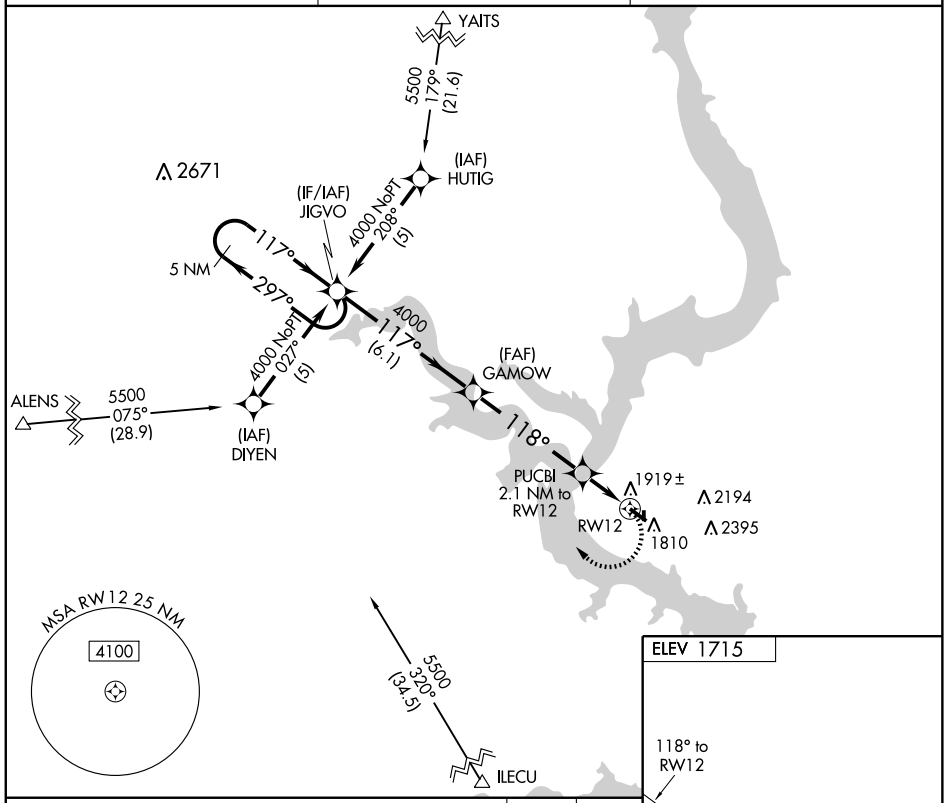
APP CRS	Rwy ldg	4411
118°	TDZE	1703
	Apt Elev	1715

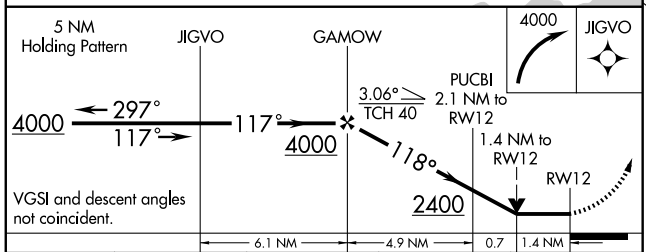
RNAV (GPS) RWY 12
MOBRIDGE MUNI (MBG)

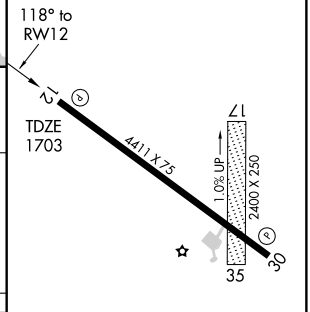
DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.
If local altimeter setting not received, use Pierre Rgnl altimeter setting and increase all MDAs 180 feet.

MISSED APPROACH: Climbing right turn to 4000 direct JIGVO and hold.

ASOS	HURON RADIO	UNICOM
121.425	122.35	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	2180-1 477 (500-1)		2180-1¼ 477 (500-1¼)	2180-1½ 477 (500-1½)
CIRCLING	2360-1 645 (700-1)		2360-1¾ 645 (700-1¾)	2560-2¾ 845 (900-2¾)

MIRL Rwy 12-30 L

NC-1. 03 JUN 2010 to 01 JUL 2010

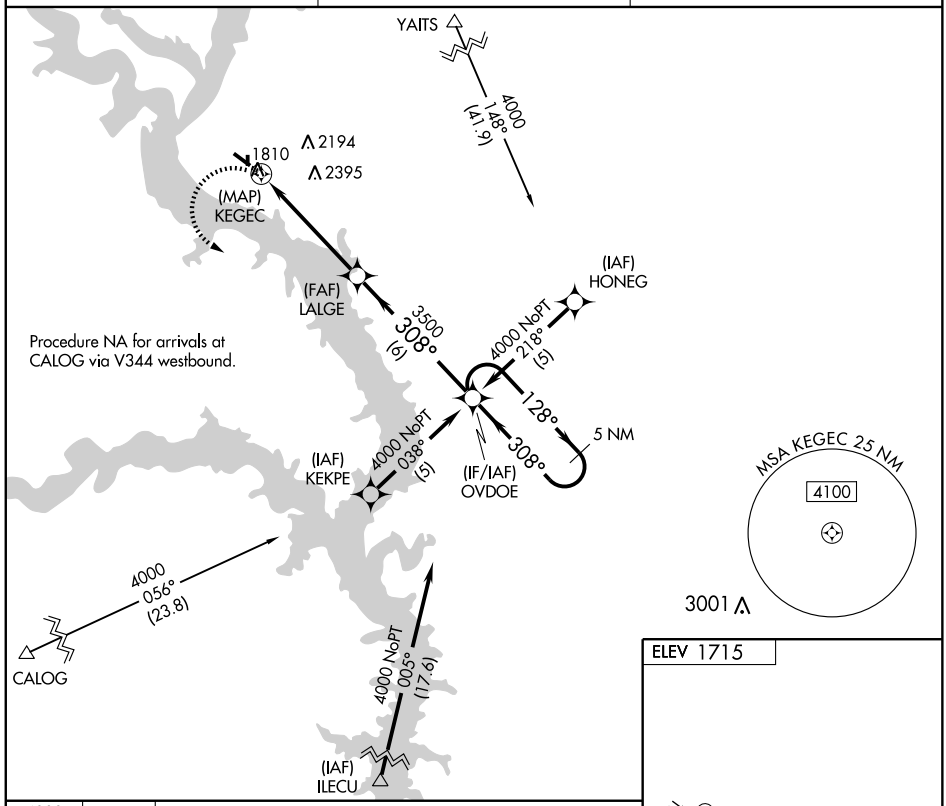
APP CRS	Rwy ldg	4411
308°	TDZE	1703
	Apt Elev	1715

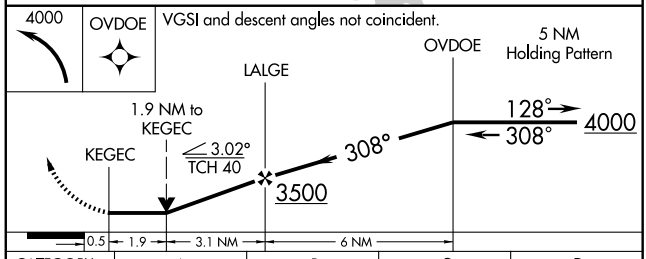
RNAV (GPS) RWY 30
MOBRIDGE MUNI (MBG)

DME/DME RNP- 0.3 NA.
Visibility reduction by helicopters NA.
If local altimeter setting not received, use Pierre Rgnl altimeter setting and increase all MDAs 180 feet.

MISSED APPROACH: Climbing left turn to 4000 direct OVDOE and hold.

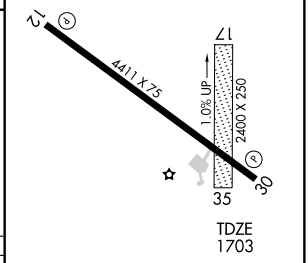
ASOS	HURON RADIO	UNICOM
121.425	122.35	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	2500-1 797 (800-1)	2500-1¼ 797 (800-1¼)	2500-2¼ 797 (800-2¼)	2500-2½ 797 (800-2½)
CIRCLING	2500-1 785 (800-1)	2500-1¼ 785 (800-1¼)	2500-2¼ 785 (800-2¼)	2560-2¾ 845 (900-2¾)

ELEV 1715



MIRL Rwy 12-30 L

NC-1. 03 JUN 2010 to 01 JUL 2010

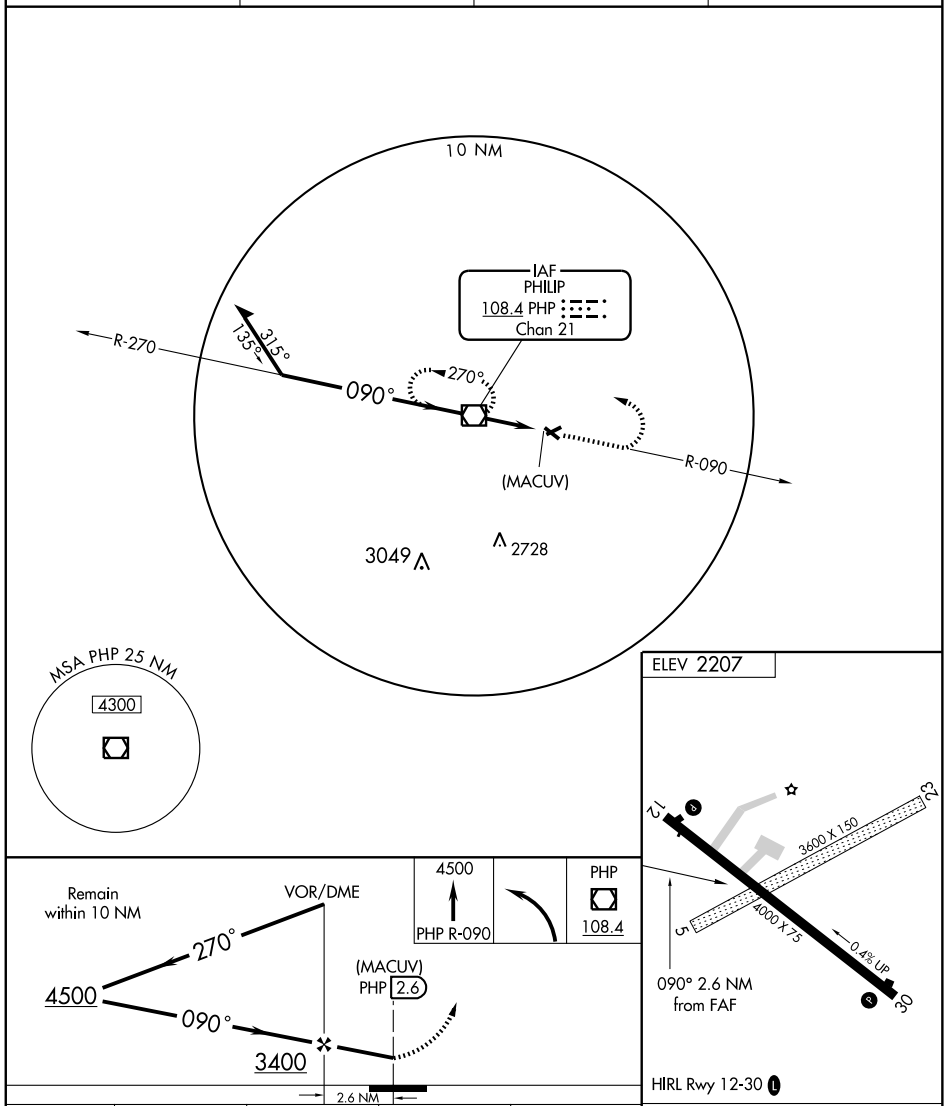
VOR/DME PHP 108.4 Chan 21	APP CRS 090°	Rwy ldg N/A TDZE N/A Apt Elev 2207

VOR or GPS-A
PHILIP (PHP)

NA

MISSED APPROACH: Climb to 4500 via PHP R-090, then left turn direct PHP VOR/DME and hold.

ASOS	DENVER CENTER	HURON RADIO	UNICOM
118.375	127.95 338.2	122.4	122.8 (CTAF) L



CATEGORY	A	B	C	D
CIRCLING	2720-1 513 (600-1)	2740-1 533 (600-1)	2780-1½ 573 (600-1½)	2820-2 613 (700-2)

FAF to MAP 2.6 NM

Knots	60	90	120	150	180
Min:Sec	2:36	1:44	1:18	1:02	0:52

NC-1. 03 JUN 2010 to 01 JUL 2010

ILS or LOC RWY 31
PIERRE RGNL (PIR)

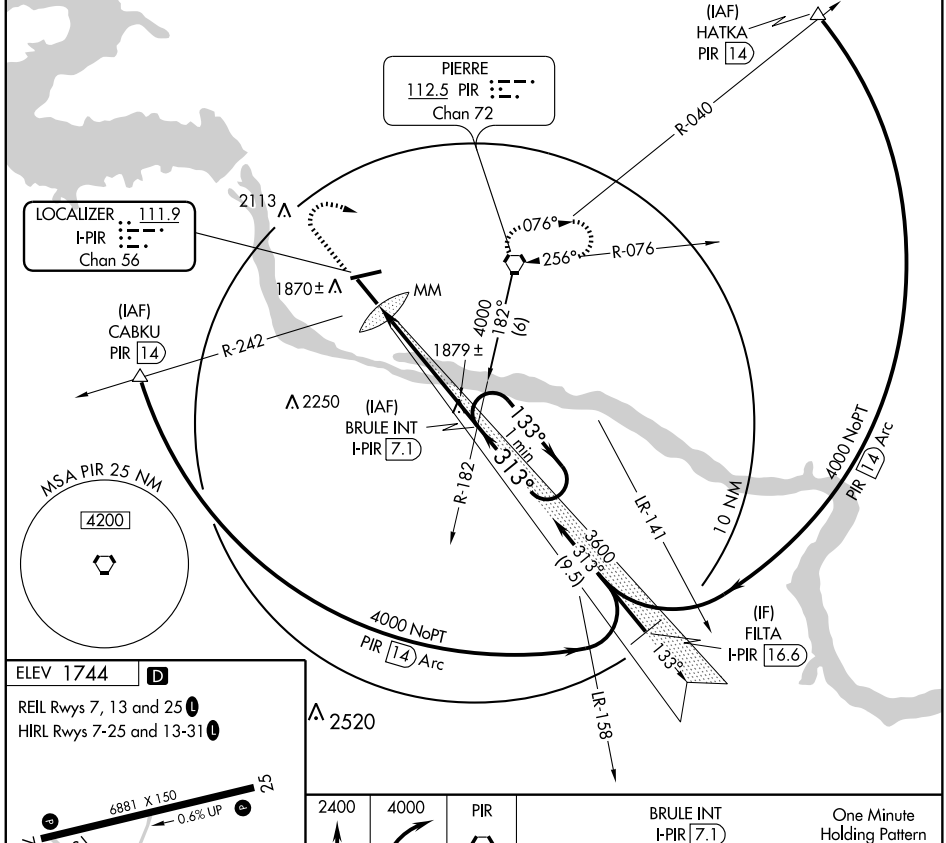
LOC/DME I-PIR	APP CRS	Rwy ldg	6900
111.9	313°	TDZE	1720
Chan 56		Apt Elev	1744

Autopilot coupled approach NA below 2255.

MALSR

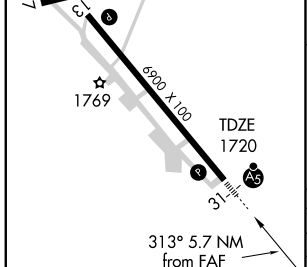
MISSED APPROACH: Climb to 2400 then climbing right turn to 4000 direct PIR VORTAC and hold, continue climb-in-hold to 4000.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	125.1 269.1	122.7 L	122.95

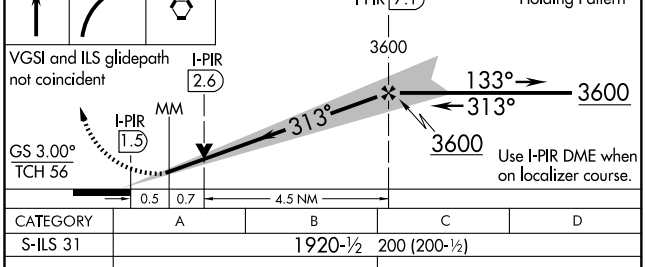


ELEV 1744 D

REIL Rwys 7, 13 and 25 L
HIRL Rwys 7-25 and 13-31 L



FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54



CATEGORY	A	B	C	D
S-ILS 31	1920-½ 200 (200-½)			
S-LOC 31	2140-½ 420 (400-½)		2140-¾ 420 (400-¾)	
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 45804 W07A	APP CRS 069°	Rwy ldg 6881 TDZE 1744 Apt Elev 1744

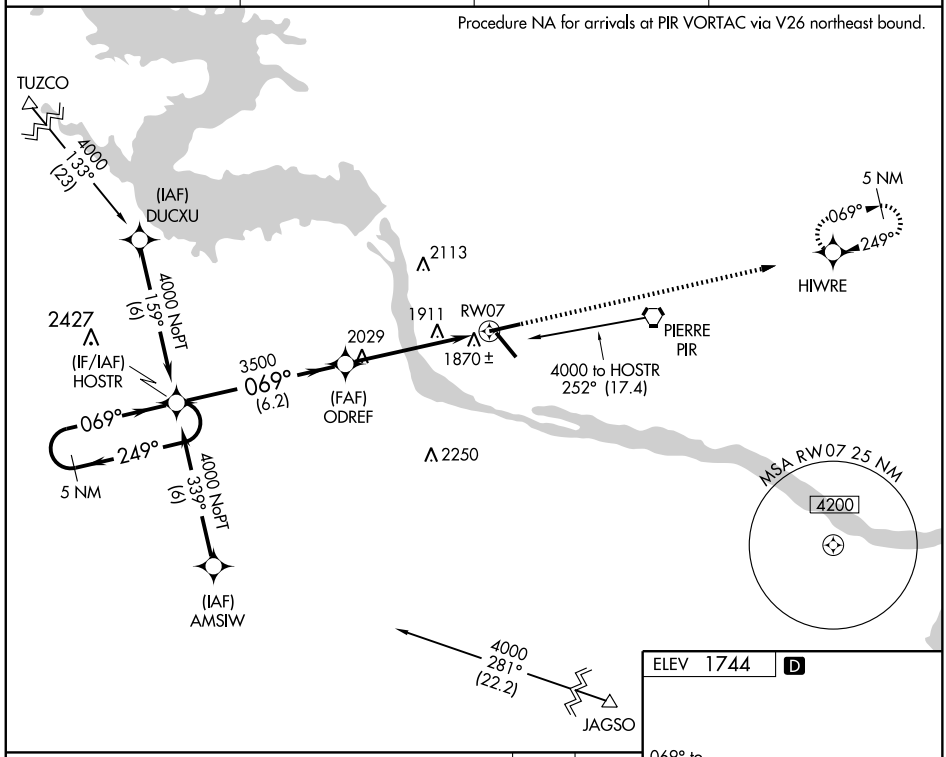
RNAV (GPS) RWY 7
PIERRE RGNL (PIR)

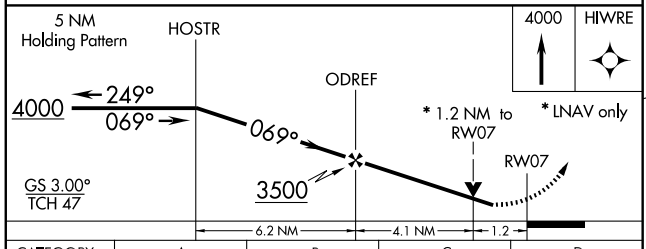
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F).
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

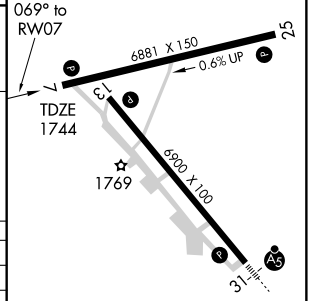
MISSED APPROACH: Climb to 4000 direct HIWRE and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	125.1 269.1	122.7 L	122.95

Procedure NA for arrivals at PIR VORTAC via V26 northeast bound.







CATEGORY	A	B	C	D
LPV DA	2057-1 313 (400-1)			
LNAV/VNAV DA	2170-1½ 426 (500-1½)			
LNAV MDA	2180-1 436 (500-1)		2180-1¼ 436 (500-1¼)	2180-1½ 436 (500-1½)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

REIL Rwys 7, 13, and 25 L
HIRL Rwys 7-25 and 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 53404 W13A	APP CRS 133°	Rwy ldg 6900 TDZE 1731 Apt Elev 1744

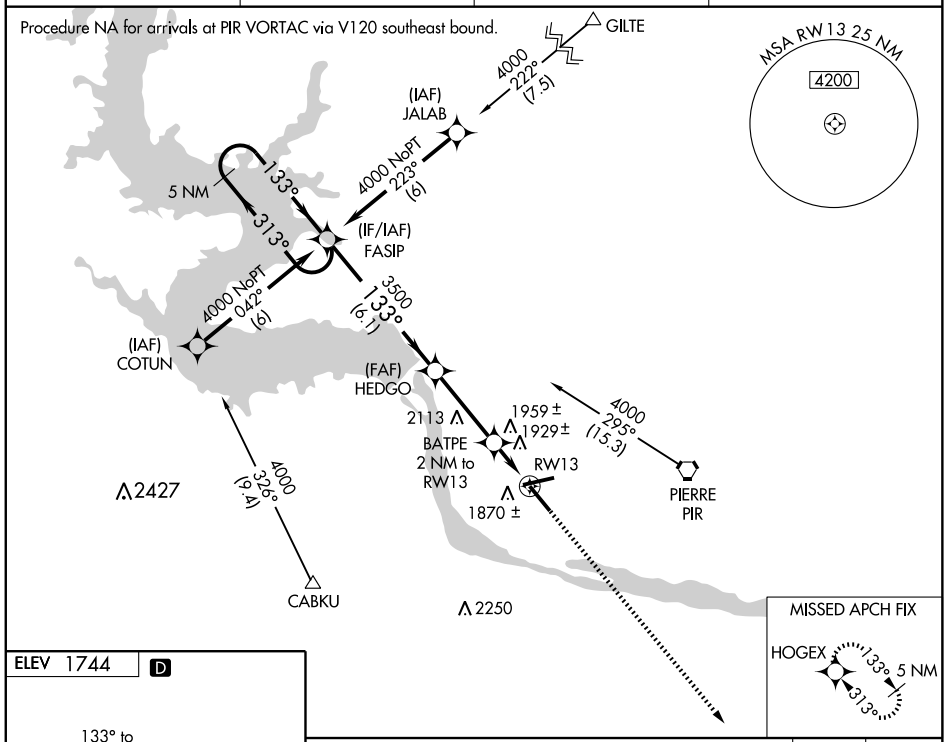
RNAV (GPS) RWY 13
PIERRE RGNL (PIR)

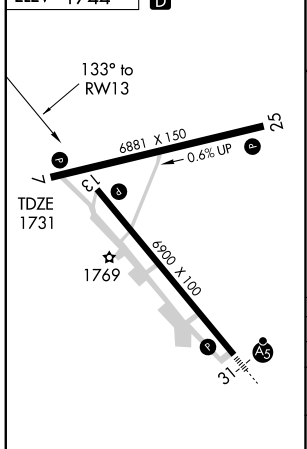
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 4000 direct HOGEX and hold.

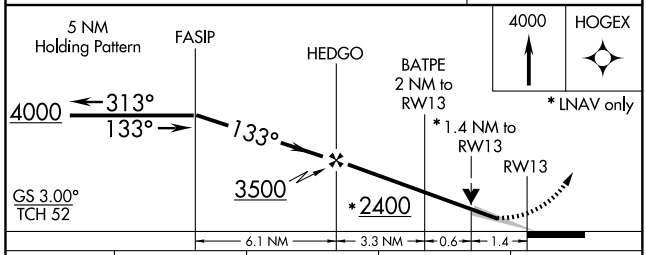
ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	125.1 269.1	122.7 L	122.95

Procedure NA for arrivals at PIR VORTAC via V120 southeast bound.





REIL Rwys 7, 13, and 25 L
HIRL Rwys 7-25 and 13-31 L



CATEGORY	A	B	C	D
LPV DA	1981-¾ 250 (300-¾)			
LNAV/VNAV DA	2285-2 554 (600-2)			
LNAV MDA	2220-1 489 (500-1)		2220-1¼ 489 (500-1¼)	2220-1½ 489 (500-1½)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 63104 W25A	APP CRS 249°	Rwy ldg 6881 TDZE 1725 Apt Elev 1744

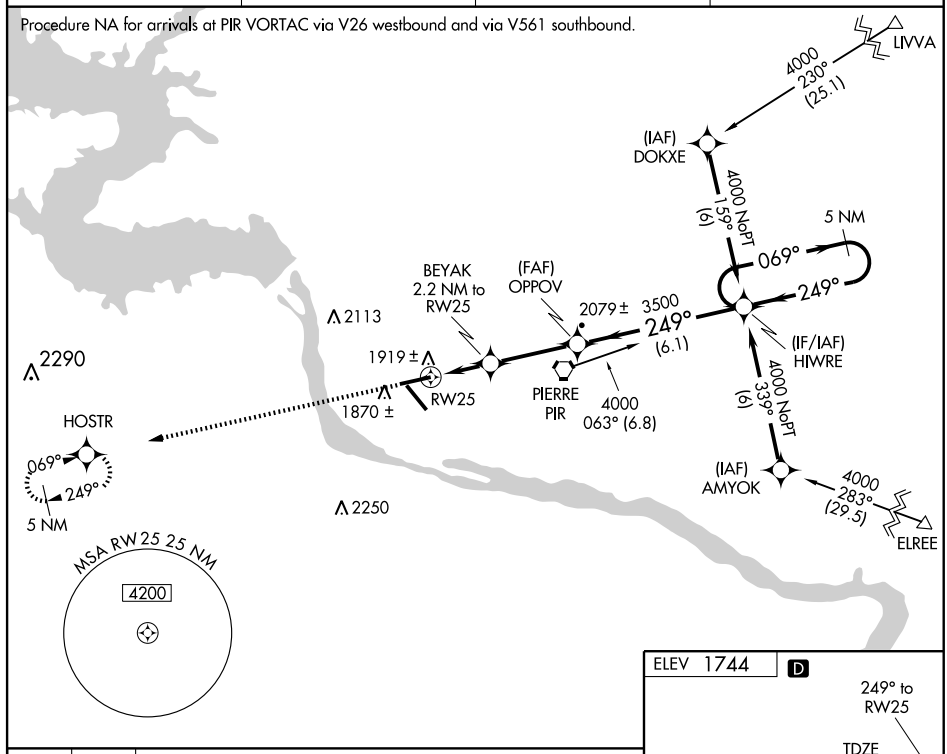
RNAV (GPS) RWY 25
PIERRE RGNL (PIR)

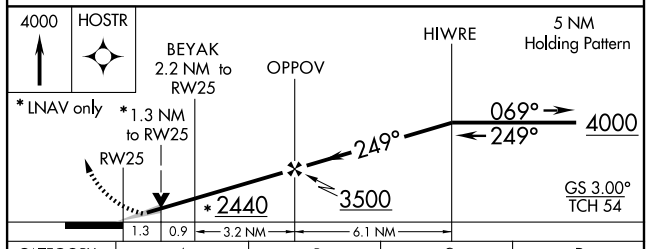
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA.

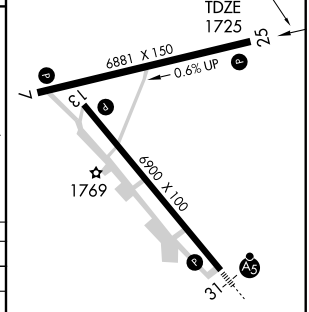
MISSED APPROACH: Climb to 4000 direct HOSTR and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	125.1 269.1	122.7 L	122.95

Procedure NA for arrivals at PIR VORTAC via V26 westbound and via V561 southbound.







CATEGORY	A	B	C	D
LPV DA	1975-1 250 (300-1)			
LNAV/VNAV DA	2179-1¾ 454 (500-1¾)			
LNAV MDA	2180-1 455 (500-1)		2180-1¼ 455 (500-1¼)	2180-1½ 455 (500-1½)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

REIL Rwys 7, 13, and 25 L
HIRL Rwys 7-25 and 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS Chan **65623** W31A	APP CRS **313°**	Rwy ldg **6900** TDZE **1720** Apt Elev **1744**

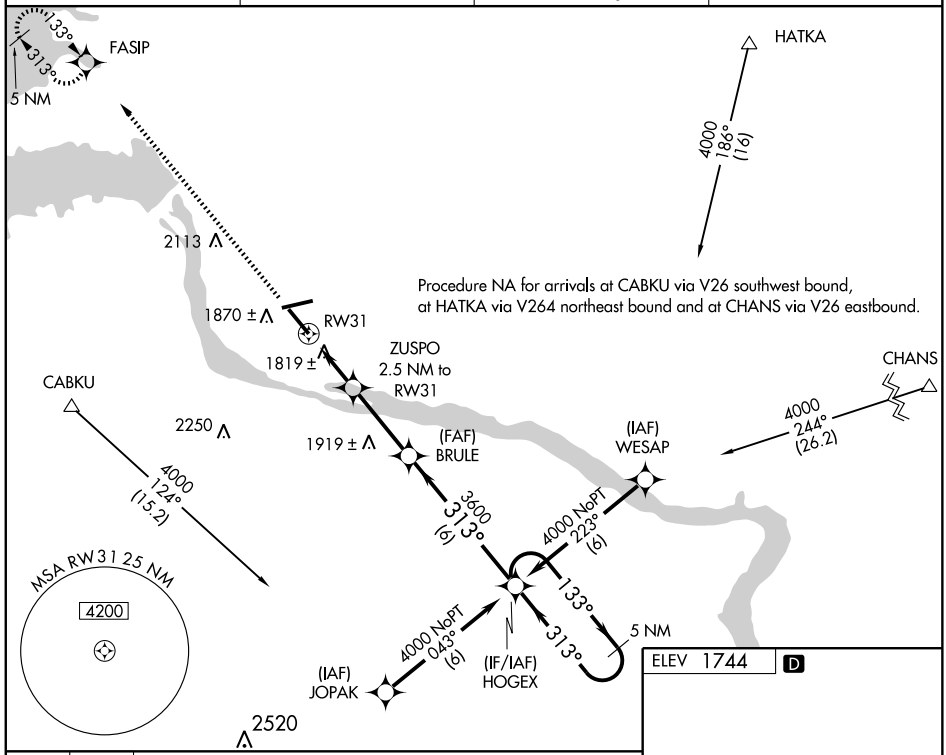
RNAV (GPS) RWY 31
PIERRE RGNL (PIR)

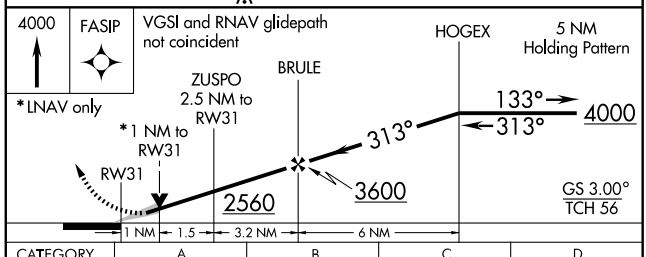
DME/DME RNP-0.3 NA.
Baro-VNAV NA below -18°C (0°F).
For inoperative MALSR increase LPV visibility to ¾ all Cats, and LNAV Cat D visibility to 1¼.

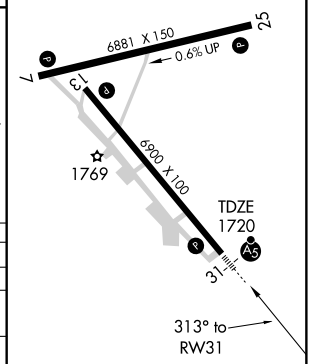
MALSR

MISSED APPROACH: Climb to 4000 direct FASIP and hold.

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	**125.1 269.1**	**122.7** L	**122.95**







CATEGORY	A	B	C	D
LPV DA	1970-½ 250 (300-½)			
LNAV/VNAV DA	2115-¾ 395 (400-¾)			
LNAV MDA	2080-½ 360 (400-½)			2080-1 360 (400-1)
CIRCLING	2240-1¼ 496 (500-1¼)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

REIL Rwys 7, 13, and 25 L
HIRL Rwys 7-25 and 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

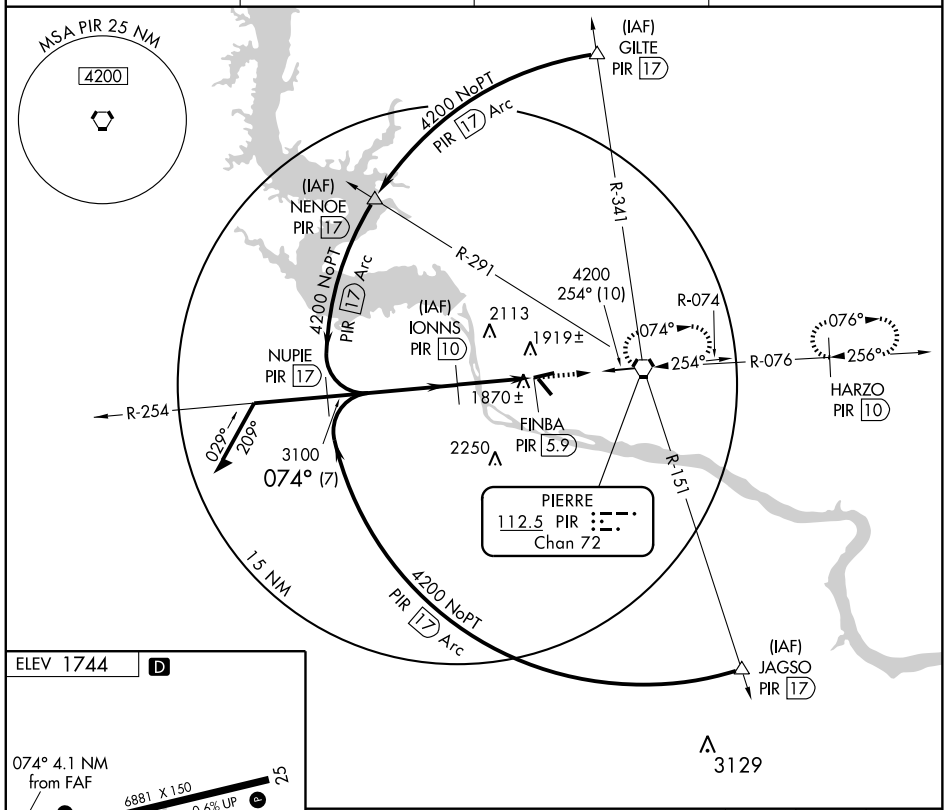
VORTAC PIR 112.5 Chan 72	APP CRS 074°	Rwy ldg 6881 TDZE 1744 Apt Elev 1744

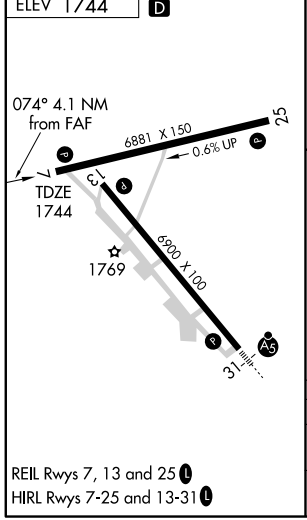
VOR/DME or TACAN RWY 7

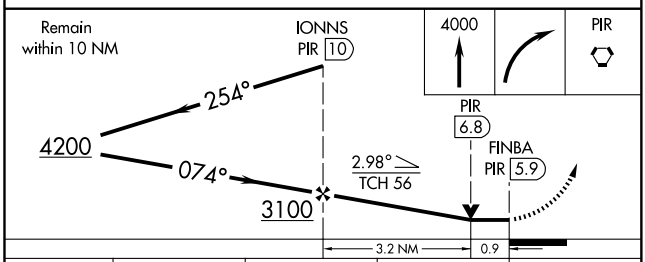
PIERRE RGNL (PIR)

MISSED APPROACH: Climb to 4000 then right turn direct PIR VORTAC and hold. (TACAN aircraft continue via PIR R-076 to HARZO 10 DME and hold East, right turns, 256° inbound).

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	125.1 269.1	122.7 L	122.95







CATEGORY	A	B	C	D
S-7	2180-1 436 (500-1)		2180-1¼ 436 (500-1¼)	2180-1½ 436 (500-1½)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

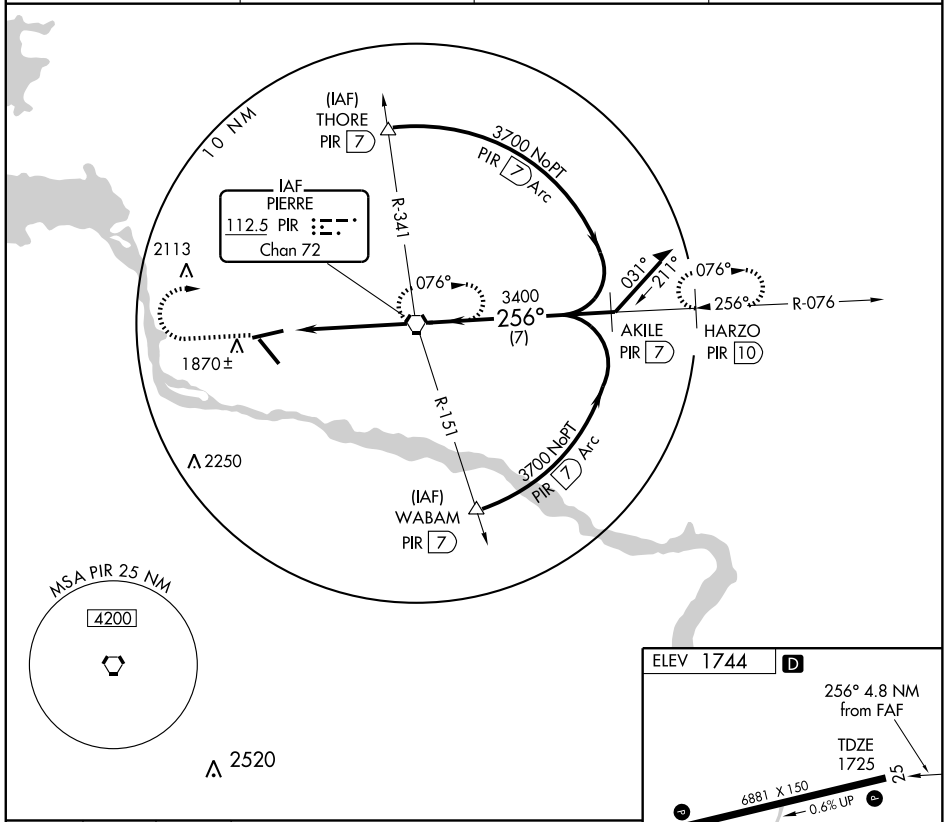
VORTAC PIR 112.5 Chan 72	APP CRS 256°	Rwy ldg 6881 TDZE 1725 Apt Elev 1744

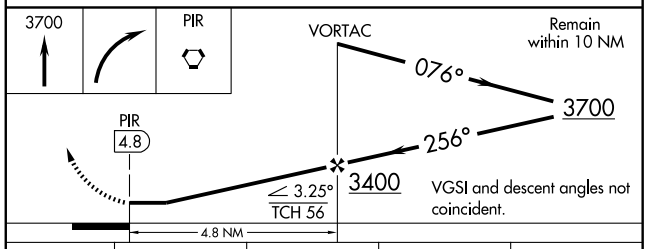
VOR or TACAN RWY 25

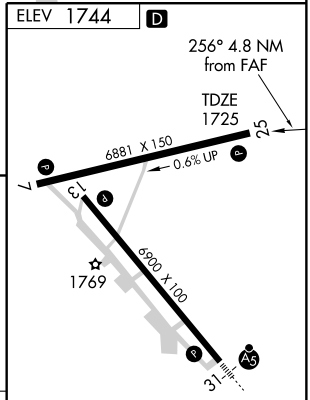
PIERRE RGNL (PIR)

MISSED APPROACH: Climb to 3700 then right turn direct PIR VORTAC and hold. (TACAN aircraft continue via PIR R-076 to HARZO 10 DME and hold east, right turns, 256° inbound)

ASOS	MINNEAPOLIS CENTER	CTAF	UNICOM
119.025	125.1 269.1	122.7 L	122.95







REIL Rwys 7, 13, and 25 L
HIRL Rwys 7-25 and 13-31 L

CATEGORY	A	B	C	D
S-25	2120-1 395 (400-1)			2120-1¼ 395 (400-1¼)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

NC-1. 03 JUN 2010 to 01 JUL 2010

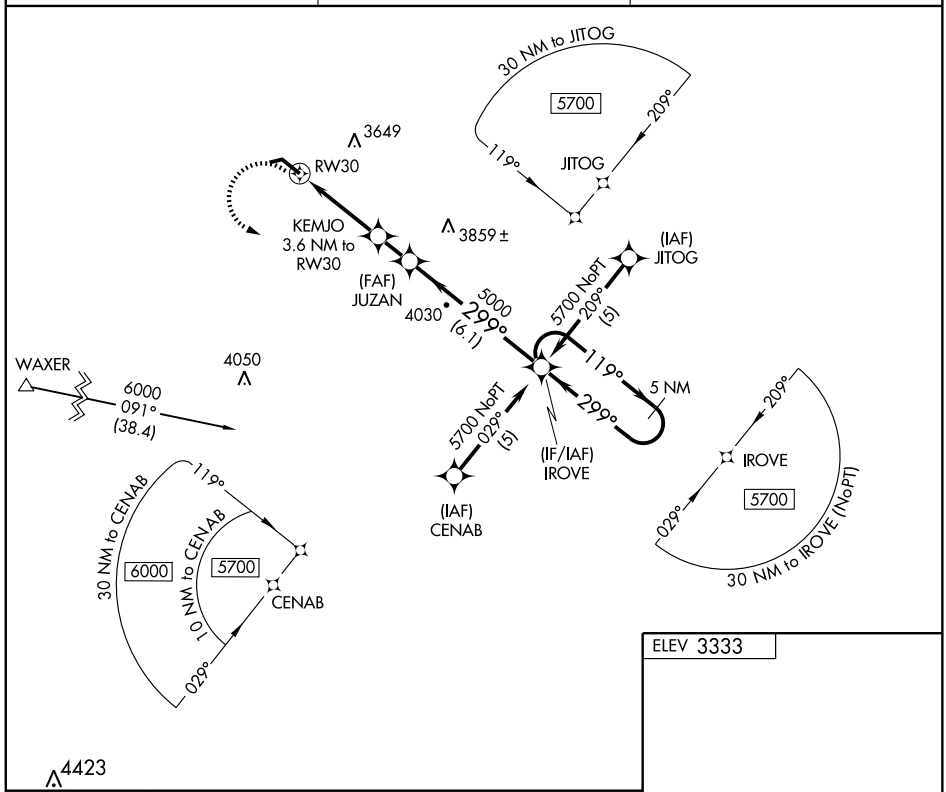
APP CRS	Rwy ldg	5000
299°	TDZE	3333
	Apt Elev	3333

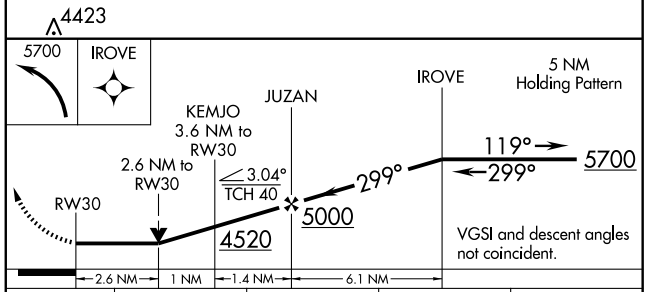
RNAV (GPS) RWY 30
PINE RIDGE (IEN)

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
VDP NA when using Chadron altimeter setting.
When local altimeter setting not received, use Chadron altimeter setting and increase all MDA 80 feet, and Cat A visibility ¼ mile.

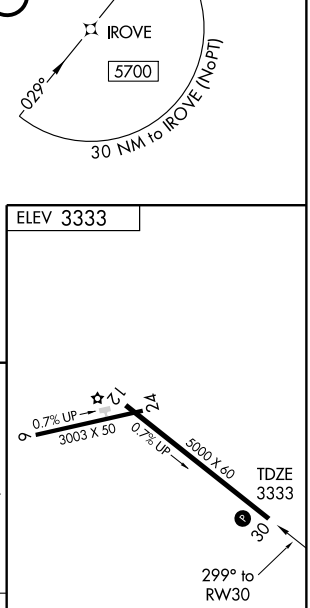
MISSED APPROACH: Climbing left turn to 5700 direct IROVE and hold.

ASOS	DENVER CENTER	CTAF
126.775	127.95 338.2	122.9 L





CATEGORY	A	B	C	D
LNAV MDA	4180-1 847 (900-1)	4180-1¼ 847 (900-1¼)	NA	
CIRCLING	4180-1 847 (900-1)	4180-1¼ 847 (900-1¼)	NA	

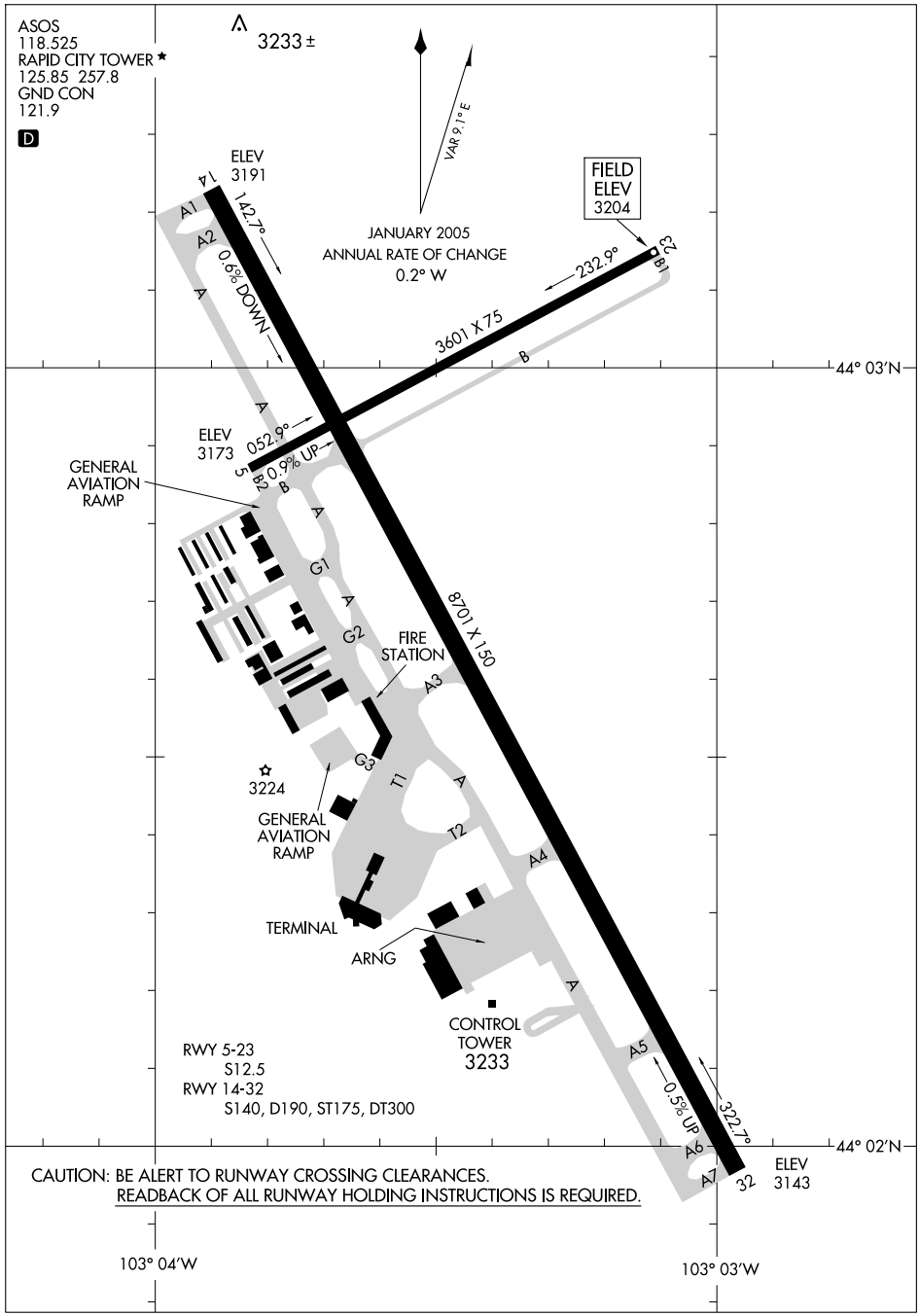


NC-1. 03 JUN 2010 to 01 JUL 2010

AIRPORT DIAGRAM

AL-877 (FAA)

RAPID CITY RGNL (RAP)
RAPID CITY, SOUTH DAKOTA



ILS or LOC RWY 32
RAPID CITY RGNL (RAP)

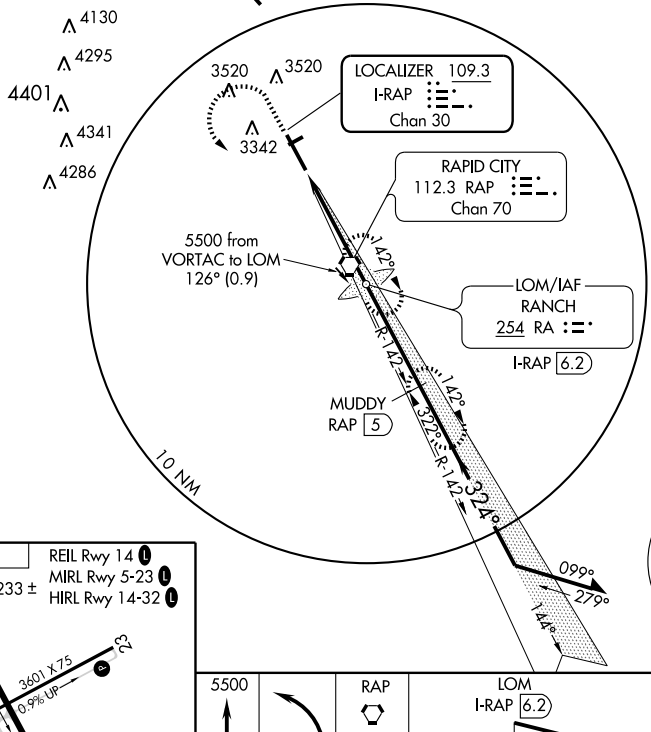
LOC/DME I-RAP	APP CRS	Rwy ldg	8701
109.3	324°	TDZE	3160
Chan 30		Apt Elev	3204

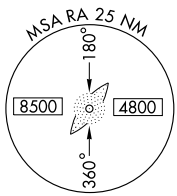
Circling to Rwy 5-23 NA at night. When local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all DA 26 feet and all MDA 40 feet, increase S-LOC 32 Cat E visibility ½mile. For inoperative MALSR, increase S-LOC 32 Cat E visibility to 1½ and S-ILS 32 Cat E visibility to RVR 4000. VDP NA with Ellsworth AFB altimeter setting. *RVR 1800 authorized with the use of FD or AP or HUD to DA. For inoperative MALSR, when using Ellsworth AFB altimeter setting, increase S-ILS 32 Cat E visibility to RVR 4000 and S-LOC 32 Cat E visibility to 1¾.

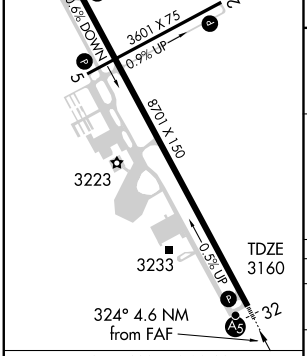
MALSR

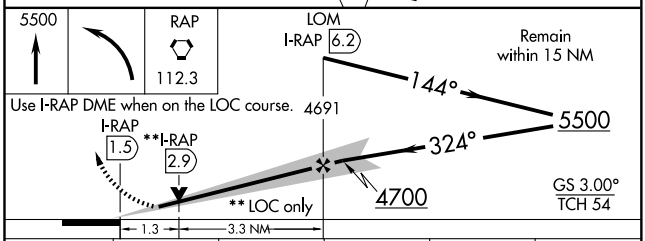
MISSED APPROACH: Climb to 5500 then left turn direct RAP VORTAC and hold. (TACAN aircraft continue via RAP VORTAC R-142 to MUDDY 5 DME and hold SE, RT, 322° inbound.)

ASOS	ELLSWORTH APP CON *	RAPID CITY TOWER *	GND CON	UNICOM
118.525	119.5 259.1	125.85 (CTAF) L 257.8	121.9	122.95









FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

CATEGORY	A	B	C	D	E
S-ILS 32	* 3360/24 200 (200-½)				3360/24 200 (200-½)
S-LOC 32	3620/24 460 (500-½)		3620/40 460 (500-¾)	3620/50 460 (500-1)	
CIRCLING	3660-1 456 (500-1)	3680-1 476 (500-1)	3680-1½ 476 (500-1½)	3820-2 616 (700-2)	3960-2¾ 756 (800-2¾)

NC-1. 03 JUN 2010 to 01 JUL 2010

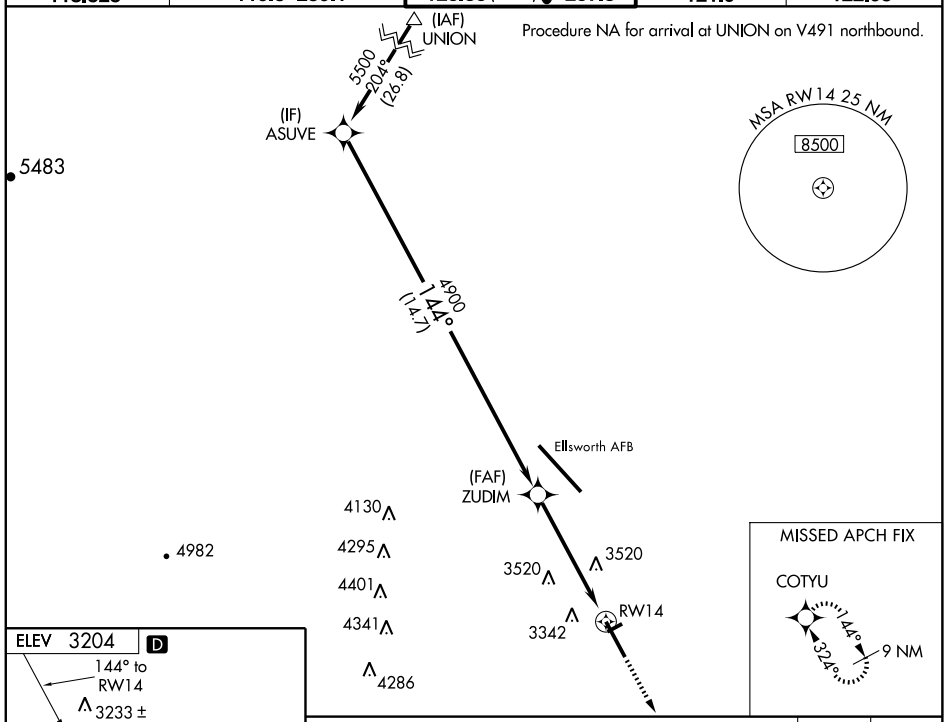
RNAV (GPS) RWY 14
RAPID CITY RGNL (RAP)

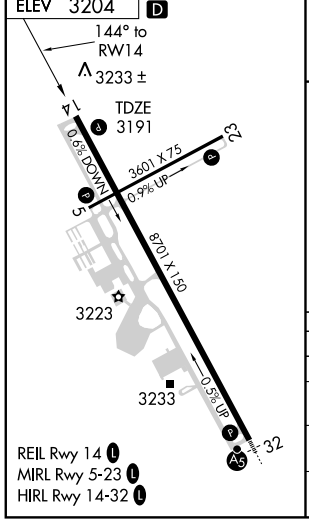
WAAS CH 60919 W14A	APP CRS 144°	Rwy ldg 8701 TDZE 3191 Apt Elev 3204

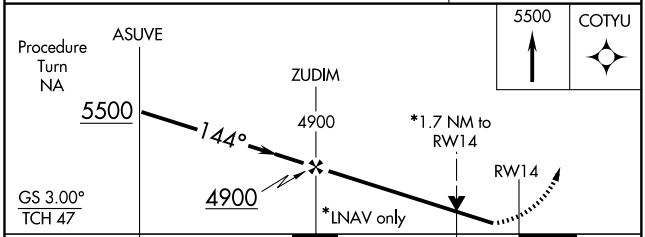
Circling to Rwy 5-23 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 42°C (107°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all DA 26 feet and all MDA 40 feet and increase LNAV Cats C/D/E and Circling Cat C visibility ¼ mile. VDP NA with Ellsworth AFB altimeter setting. Baro-VNAV NA when using Ellsworth AFB altimeter setting.

MISSED APPROACH: Climb to 5500 direct COTYU and hold.

ASOS	ELLSWORTH APP CON ★	RAPID CITY TOWER ★	GND CON	UNICOM
118.525	119.5 259.1	125.85 (CTAF) L 257.8	121.9	122.95







CATEGORY	A	B	C	D	E
LPV DA	3450-1 259 (300-1)				
LNAV/VNAV DA	3871-2½ 680 (700-2½)				
LNAV MDA	3780-1 589 (600-1)		3780-1½ 589 (600-1½)	3780-1¾ 589 (600-1¾)	3780-2 589 (600-2)
CIRCLING	3780-1 576 (600-1)		3780-1½ 576 (600-1½)	3820-2 616 (700-2)	3960-2¾ 756 (800-2¾)

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 93717 W32A	APP CRS 324°	Rwy ldg 8701 TDZE 3160 Apt Elev 3204

RNAV (GPS) RWY 32

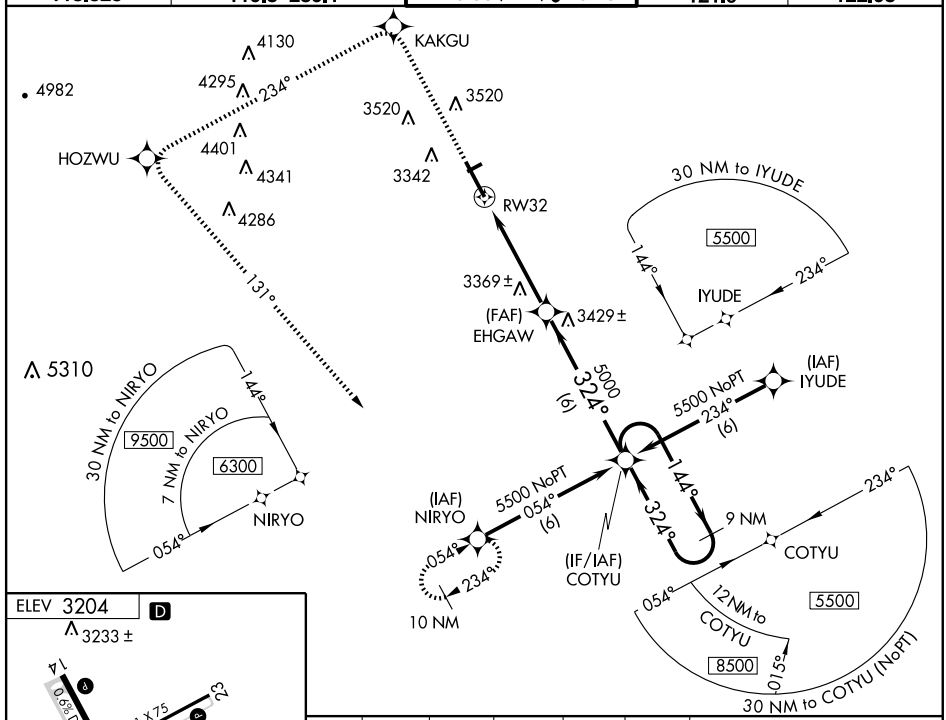
RAPID CITY RGNL (RAP)

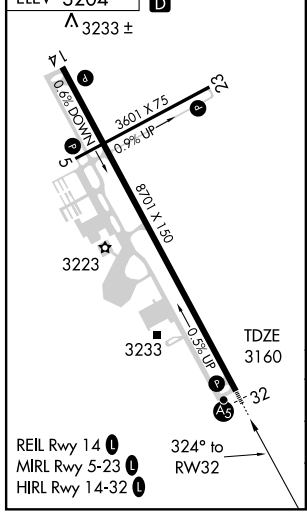
Circling to Rwy 5-23 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 42°C (107°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all DA 26 feet and all MDA 40 feet and increase LNAV Cat E visibility ¼ mile. VDP NA with Ellsworth AFB altimeter setting. Baro-VNAV NA when using Ellsworth AFB altimeter setting. For inoperative MALSR, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat D and E visibility to RVR 5000 and LNAV Cat E visibility to 1½. For inoperative MALSR, when using Ellsworth AFB altimeter setting, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat D and E visibility to RVR 5000 and LNAV Cat E visibility to 1¾.

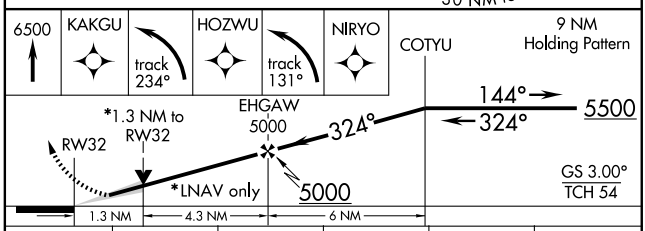
MALSR

MISSED APPROACH: Climb to 6500 direct KAKGU and left turn on track 234° to HOZWU and left turn on track 131° to NIRYO and hold.

ASOS	ELLSWORTH APP CON ★	RAPID CITY TOWER ★	GND CON	UNICOM
118.525	119.5 259.1	125.85 (CTAF) L 257.8	121.9	122.95







CATEGORY	A	B	C	D	E
LPV DA	3360/24 200 (200-½)				
LNAV/VNAV DA	3410/24 250 (300-½)			3410/40 250 (300-¾)	
LNAV MDA	3620/24 460 (500-½)		3620/40 460 (500-¾)	3620/50 460 (500-1)	
CIRCLING	3660-1 456 (500-1)	3680-1 476 (500-1)	3680-1½ 476 (500-1½)	3820-2 616 (700-2)	3960-2¾ 756 (800-2¾)

NC-1. 03 JUN 2010 to 01 JUL 2010

VORTAC RAP 112.3 Chan 70	APP CRS 141°	Rwy ldg 8701 TDZE 3191 Apt Elev 3204

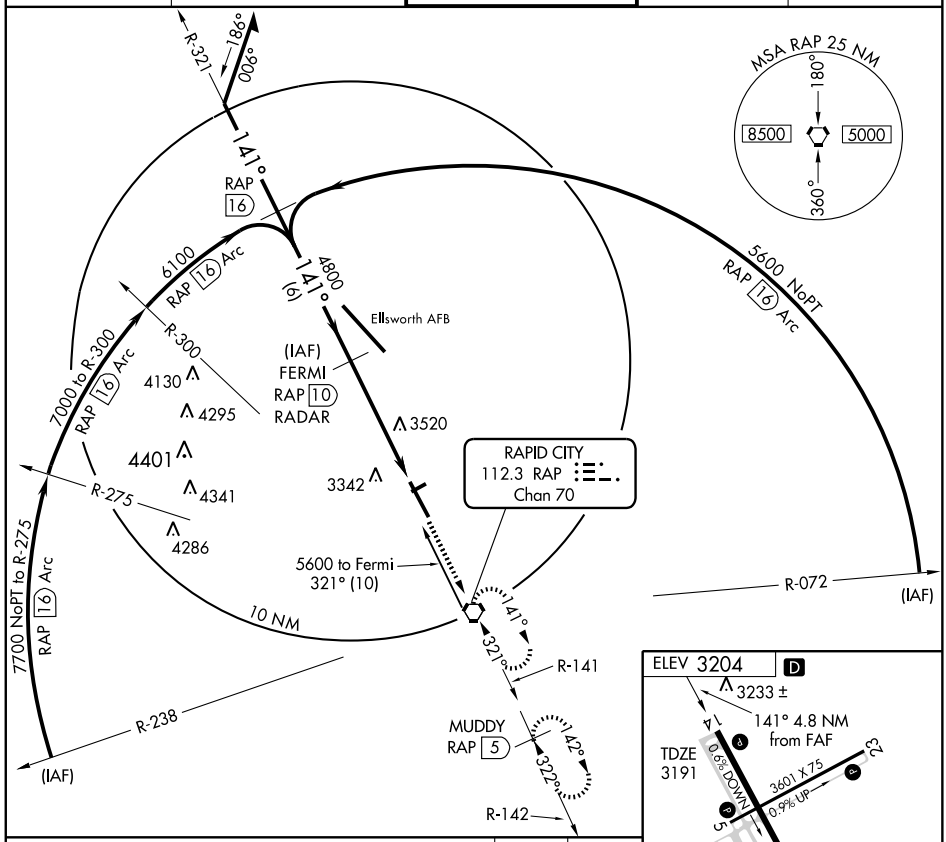
VOR or TACAN RWY 14

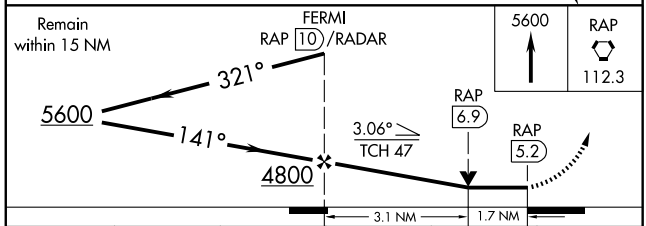
RAPID CITY RGNL (RAP)

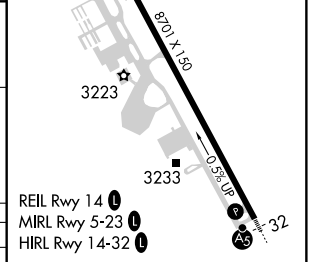
If local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all MDAs 40 feet.
VDP NA when using Ellsworth AFB altimeter setting.

MISSED APPROACH: Climb to 5600 direct RAP VORTAC and hold, continue climb-in-hold to 5600. (TACAN aircraft continue via RAP R-142 to MUDDY 5 DME and hold SE, RT, 322° inbound.)

ASOS	ELLSWORTH APP CON ★	RAPID CITY TOWER ★	GND CON	UNICOM
118.525	119.5 259.1	125.85 (CTAF) L 257.8	121.9	122.95







CATEGORY	A	B	C	D	E
S-14	3780-1	589 (600-1)	3780-1½ 589 (600-1½)	3780-1¾ 589 (600-1¾)	3780-2 589 (600-2)
CIRCLING	3780-1	576 (600-1)	3780-1½ 576 (600-1½)	3820-2 616 (700-2)	3820-2¼ 616 (700-2¼)

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

NC-1. 03 JUN 2010 to 01 JUL 2010

VORTAC RAP 112.3 Chan 70	APP CRS 322°	Rwy ldg 8701 TDZE 3160 Apt Elev 3204

VOR or TACAN RWY 32

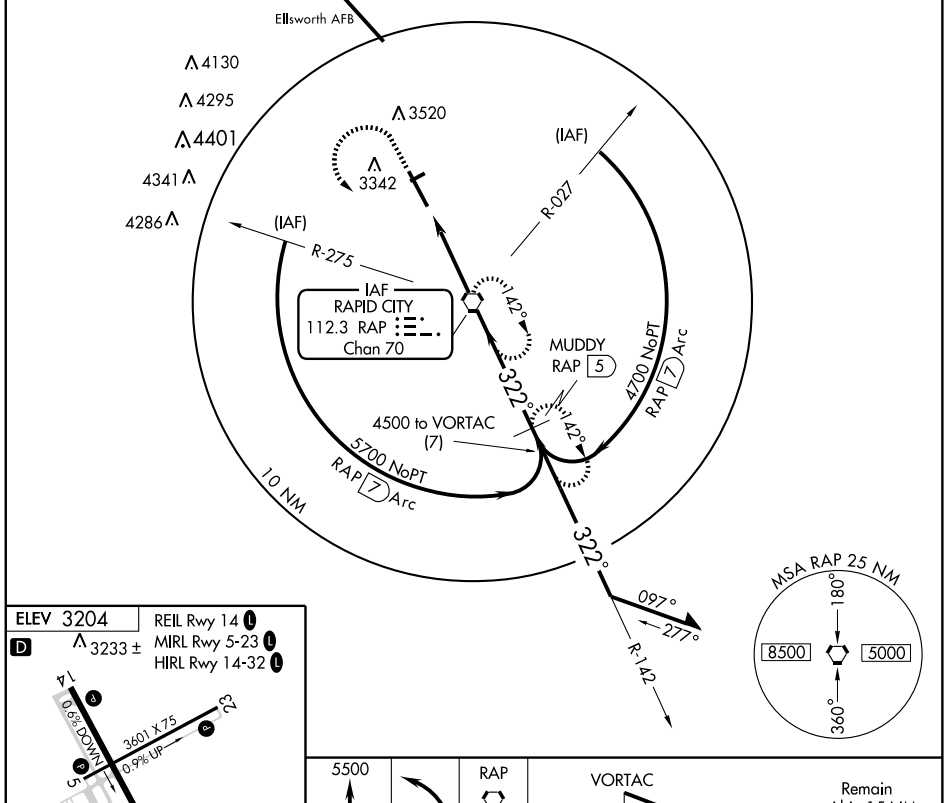
RAPID CITY RGNL (RAP)

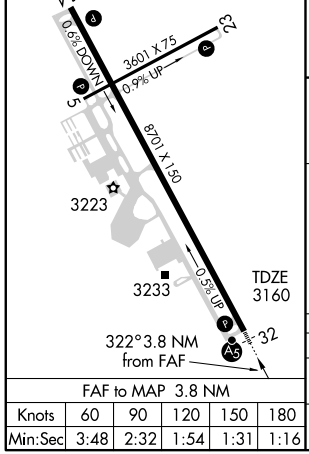
Inoperative table does not apply to Cats D and E.
If local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all MDAs 40 feet.

MALSR

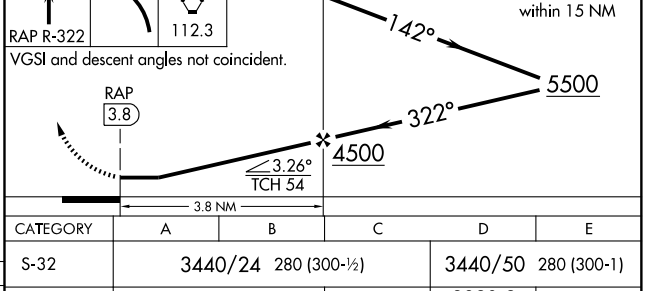
MISSED APPROACH: Climb to 5500 via RAP R-322 then left turn direct RAP VORTAC and hold. (TACAN aircraft continue via RAP R-142 to MUDDY 5 DME and hold SE, RT, 322° inbound.)

ASOS	ELLSWORTH APP CON ★	RAPID CITY TOWER ★	GND CON	UNICOM
118.525	119.5 259.1	125.85 (CTAF) L 257.8	121.9	122.95



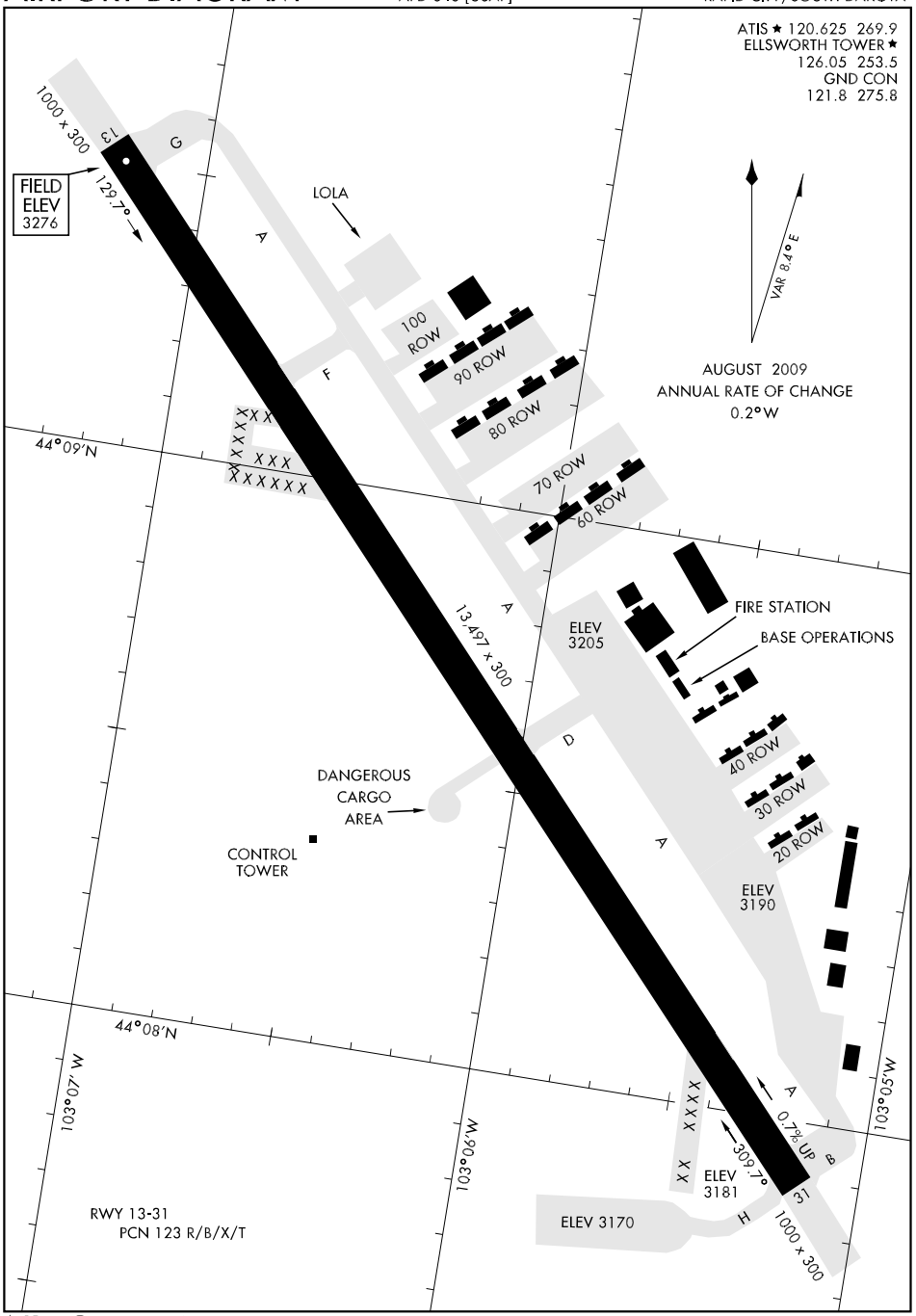


FAF to MAP 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16



CATEGORY	A	B	C	D	E
S-32	3440/24 280 (300-½)			3440/50 280 (300-1)	
CIRCLING	3660-1 456 (500-1)		3660-1½ 456 (500-1½)	3820-2 616 (700-2)	3820-2¼ 616 (700-2¼)

NC-1. 03 JUN 2010 to 01 JUL 2010

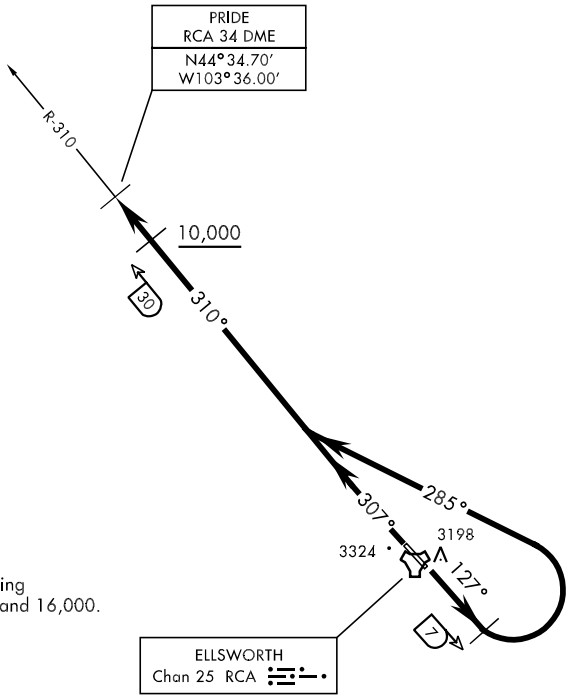


NC-1, 03 JUN 2010 to 01 JUL 2010

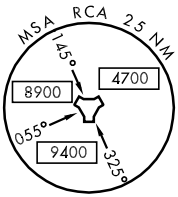
Rwy	Knots	60	120	180	240	300	360
31	V/V(fpm)	240	480	720	960	1200	1440

ATC Climb Rate to 10,000

ATIS ★120.625 269.9
GND CON
121.8 275.8
ELLSWORTH TOWER ★
126.05 253.5
ELLSWORTH DEP CON
119.5 289.4
DENVER CENTER
127.95 338.2
ELLSWORTH APP CON
119.5 259.1



CAUTION: Traffic transiting
IR-492 between 10,000 and 16,000.



Radar required for
Rwy 13 departure.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 13: Track 127° to RCA 7 DME. Turn left track 285° to intercept RCA R-310, outbound to PRIDE. Cross RCA 30 DME at or above 10,000.

TAKE-OFF RWY 31: Track 307° to intercept RCA R-310, outbound to PRIDE. Cross RCA 30 DME at or above 10,000.

NC-1, 03 JUN 2010 to 01 JUL 2010

HI-ILS or LOC RWY 13

LOC I-ELR	APCH CRS	Rwy ldg / TDZE / Arpt Elev
111.5	127°	13,497 / 3276 / 3276

JAL-343 [USAF]

ELLSWORTH AFB (KRCA)

* When ALS inop, increase RVR to 40 and vis to ¾ mile.
** When ALS inop, increase CAT CD vis to 1½ miles, CAT E vis to 1¾ miles.

ALSF-1

MISSED APPROACH: Track outbound RCA R-127 to 3 DME (CAVET), then turn left to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

ATIS ★	ELLSWORTH APP CON	ELLSWORTH TOWER ★	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	

*** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.

† When ALS inop, increase CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.

RADAR or DME REQUIRED

R-308 128° 308° RCA 50 (IAF) STURG RCA 40 128° UBEDE RCA 18 HATNI RCA 15 307° 127° BEFNO /RADAR RCA 7.2 3999 3449 3379 CAVET RCA 3 ELLSWORTH Chan 25 RCA 4982 4387 LOCALIZER 111.5 I-ELR Rapid City Regional 20 NM RCA 25 R-040 040° 220° RUUSH 15 RCA

Expect radar altimeter alert at 2.3 DME due to rising terrain on final.

MSA RCA 25 NM 145° 8000 4700 055° 8400 325°

EMERG SAFE ALT 100 NM 9800

STURG 40 128° Intcp Lczr UBEDE 18 HATNI 15 FL190 6600 6000 127° BEFNO /RADAR 7.2 2.8 AGBAH 1.9 TACAN 5200 GS 3.00° TCH 51 5.3 NM .5

CAVET RCA R-127 3 | 6000 RCA R-040 | RUUSH RCA 15

ELEV 3276
127° 5.8 NM from FAF
TDZE 3276
13,497 x 300
0.7% DOWN
3370
3348
HIRL Rwy 13-31

CATEGORY	C	D	E
S-ILS 13 *	3476/24 200 (200-½)		
S-LOC 13 **	3780/50 504 (600-1)		3780/60 504 (600-1¼)
CIRCLING ***	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 13 †	3820/50 544 (600-1)	3820/60 544 (600-1¼)	3820-1½ 544 (600-1½)

LOC FAF to MAP 5.3 NM

Knots	120	140	160	180	200
Min:Sec	2:39	2:16	1:59	1:46	1:35

NC-1, 03 JUN 2010 to 01 JUL 2010

HI-ILS or LOC RWY 31

LOC I-RCA	APCH CRS	Rwy ldg / TDZE / Arpt Elev
110.3	307°	13,497 / 3192 / 3276

JAL-343 [USAF]

ELLSWORTH AFB (KRCA)

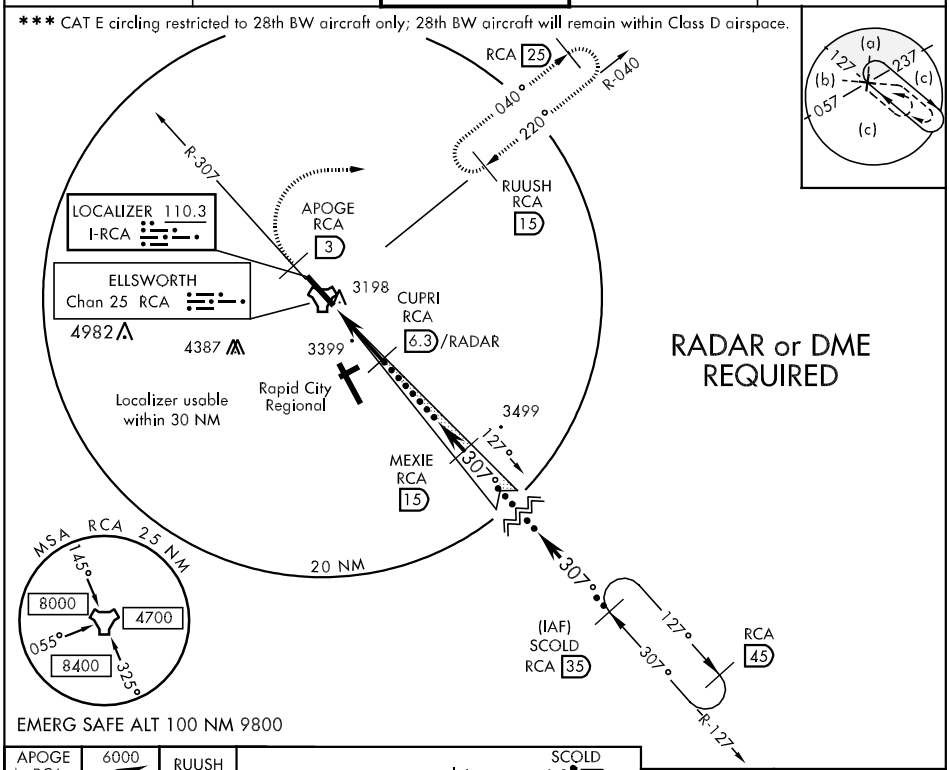
* When ALS inop, increase RVR to 40 and vis to ¾ mile.
** When ALS inop, increase CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.

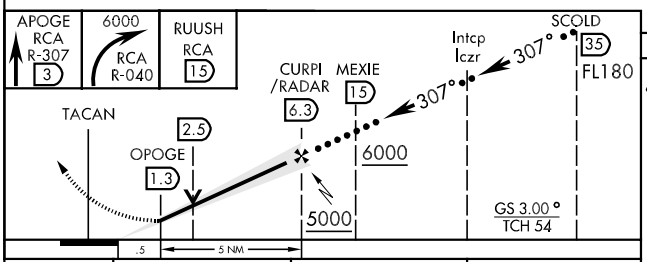
ALSF-1

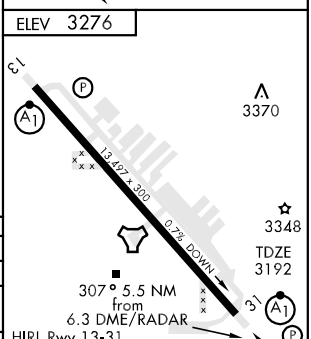
MISSED APPROACH: Track outbound RCA R-307 to 3 DME (APOGE), then turn right to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

ATIS ★	ELLSWORTH APP CON	ELLSWORTH TOWER ★	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	

*** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.







CATEGORY	C	D	E
S-ILS 31 *	3392/24 200 (200-½)		
S-LOC 31 **	3800/60 608 (600-1¼)	3800-1½ 608 (600-1½)	3800-1¾ 608 (600-1¾)
*** CIRCLING	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 31 **	3820/60 628 (600-1¼)	3820-1½ 628 (600-1½)	3820-1¾ 628 (600-1¾)

FAF to MAP 5.0 NM					
Knots	120	140	160	180	200
Min:Sec	2:30	2:09	1:52	1:40	1:30

NC-1, 03 JUN 2010 to 01 JUL 2010

HI-TACAN RWY 13

TACAN RCA Chan 25	APCH CRS 133°	Rwy ldg 13,497 TDZE 3276 Arpt Elev 3276	JAL-343 [USAF]	ELLSWORTH AFB (KRCA)

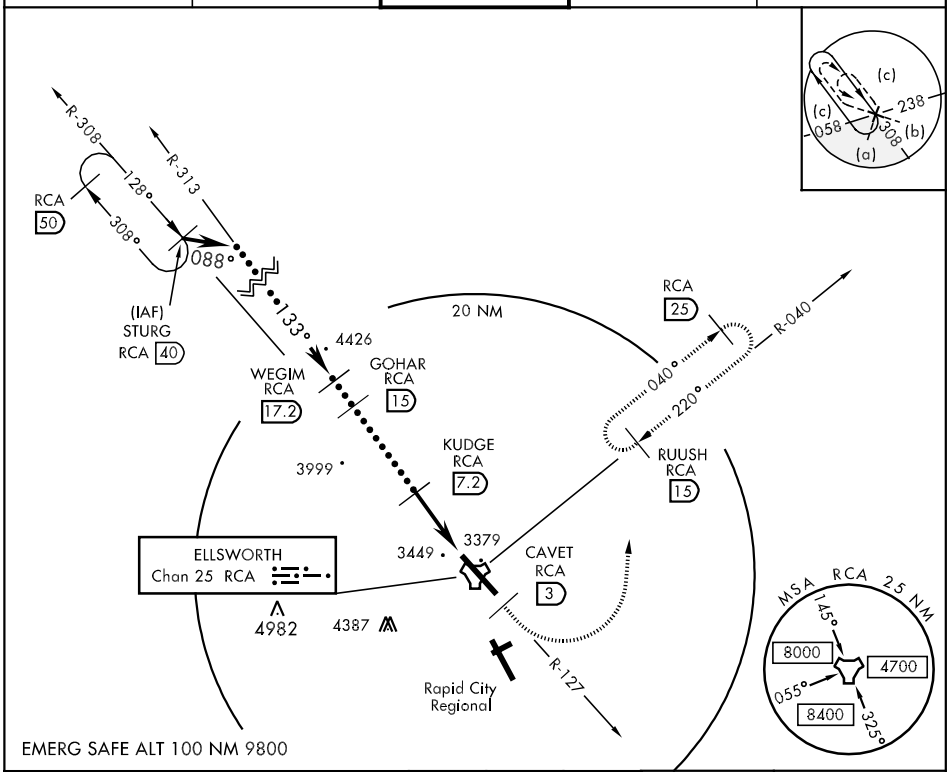
* When ALS inop, increase CAT CDE vis ½ mile.

** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.

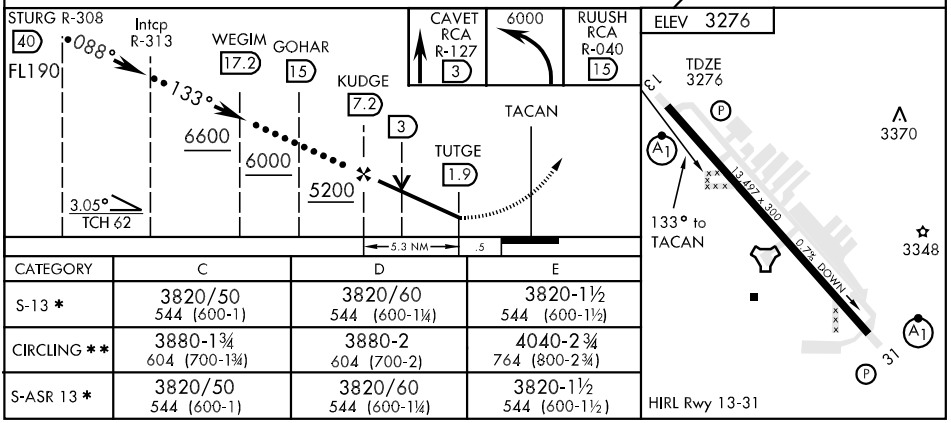
ALSF-1

MISSED APPROACH: Track outbound RCA R-127 to 3 DME (CAVET), then turn left to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

ATIS *	ELLSWORTH APP CON	ELLSWORTH TOWER *	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	



EMERG SAFE ALT 100 NM 9800



CATEGORY	C	D	E
S-13 *	3820/50 544 (600-1)	3820/60 544 (600-1¼)	3820-1½ 544 (600-1½)
CIRCLING **	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 13 *	3820/50 544 (600-1)	3820/60 544 (600-1¼)	3820-1½ 544 (600-1½)

HI-TACAN RWY 31

TACAN RCA Chan 25	APCH CRS 299°	Rwy ldg 13,497 TDZE 3192 Arpt Elev 3276

JAL-343 [USAF]

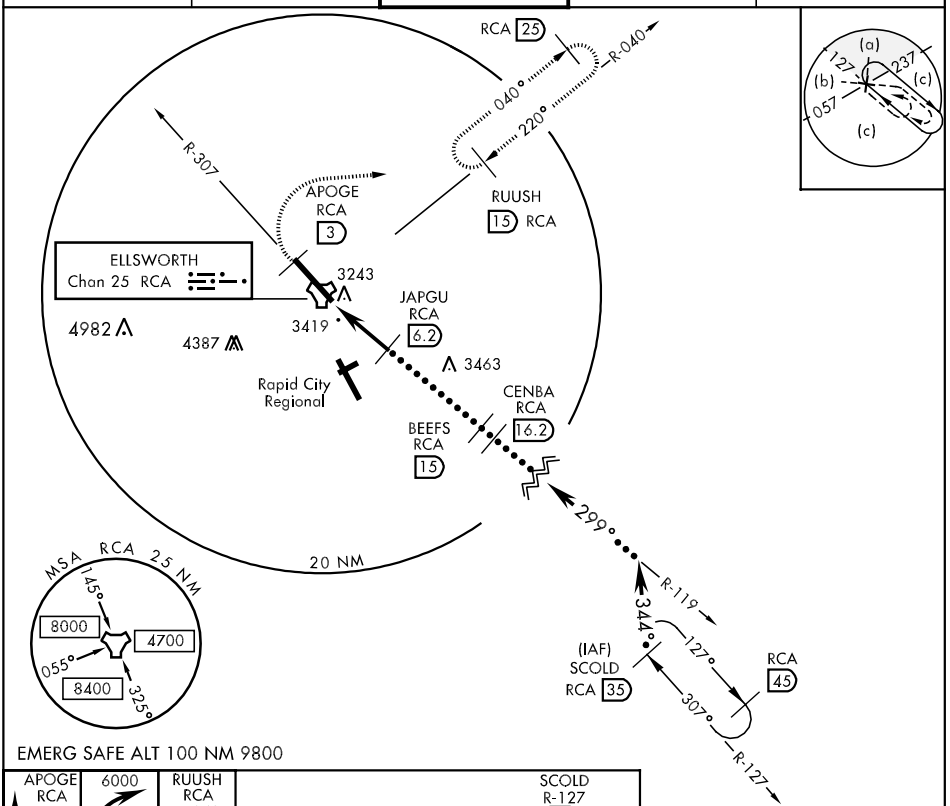
ELLSWORTH AFB (KRCA)

* When ALS inop, increase CAT CDE vis ½ mile.
** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.

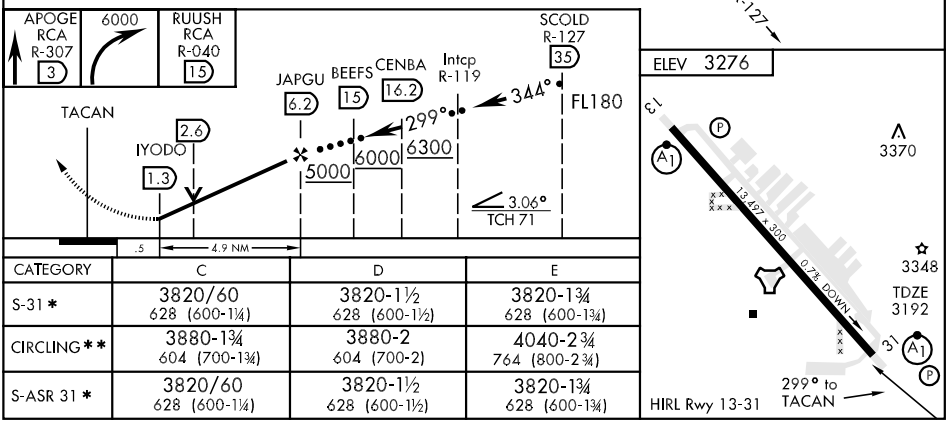
ALSF-1

MISSED APPROACH: Track outbound RCA R-307 to 3 DME (APOGE), then turn right to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

ATIS *	ELLSWORTH APP CON	ELLSWORTH TOWER *	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	



EMERG SAFE ALT 100 NM 9800



CATEGORY	C	D	E
S-31 *	3820/60 628 (600-1¼)	3820-1½ 628 (600-1½)	3820-1¾ 628 (600-1¾)
CIRCLING **	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 31 *	3820/60 628 (600-1¼)	3820-1½ 628 (600-1½)	3820-1¾ 628 (600-1¾)

ILS or LOC RWY 13

LOC I-ELR	APCH CRS	Rwy ldg / TDZE / Arpt Elev
111.5	127°	13,497 / 3276 / 3276

AL-343 [USAF]

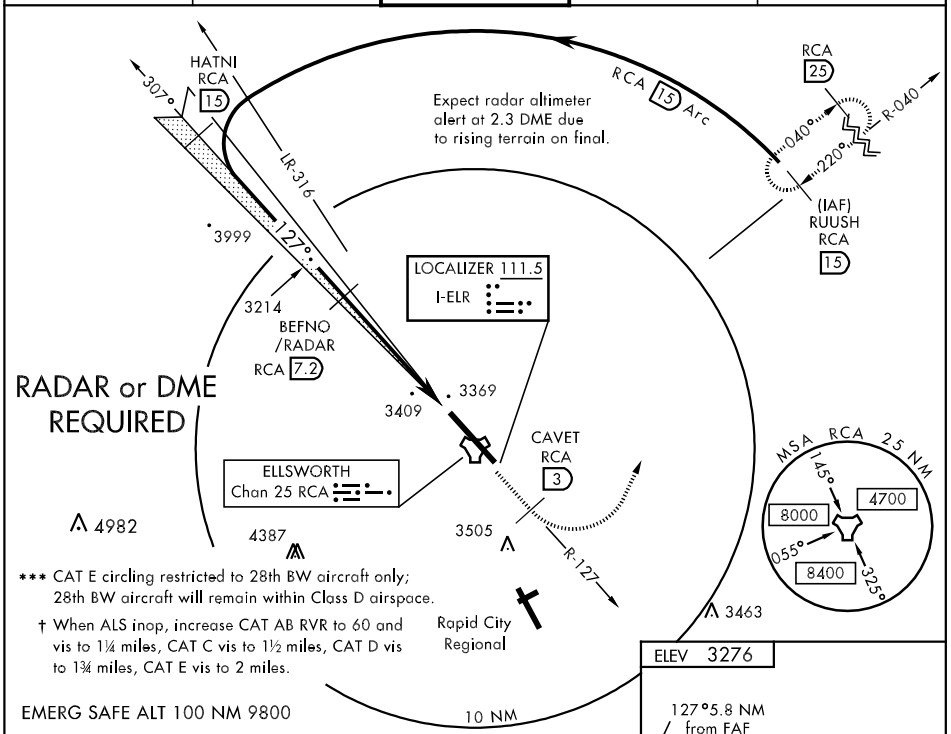
ELLSWORTH AFB (KRCA)

* When ALS inop, increase RVR to 40 and vis to ¾ mile.
** When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT CD vis to 1½ miles, CAT E vis to 1¾ miles.

ALSF-1

MISSED APPROACH: Track outbound RCA R-127 to RCA 3 DME (CAVET), then turn left to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

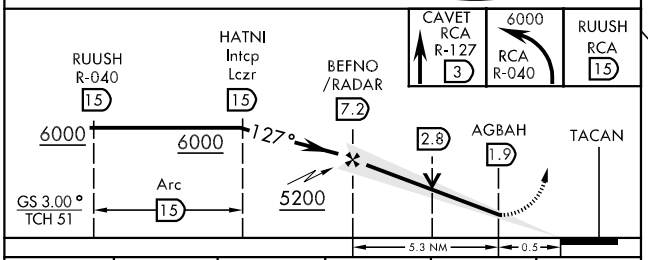
ATIS ★	ELLSWORTH APP CON	ELLSWORTH TOWER ★	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	

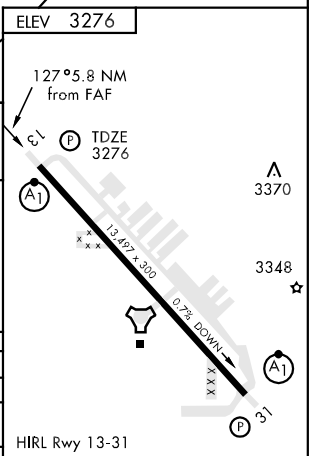


*** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.

† When ALS inop, increase CAT AB RVR to 60 and vis to 1¼ miles, CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.

EMERG SAFE ALT 100 NM 9800





CATEGORY	A	B	C	D	E
S-ILS 13 *	3476/24 200 (200-½)				
S-LOC/DME 13 **	3780/24 504 (600-½)		3780/50 504 (600-1)		3780/60 504 (600-1¼)
CIRCLING ***	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 13 †	3820/40 544 (600-¾)		3820/50 544 (600-1)	3820/60 544 (600-1¼)	3820-1½ 544 (600-1½)

LOC FAF to MAP 5.3 NM					
Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

NC-1, 03 JUN 2010 to 01 JUL 2010

ILS or LOC RWY 31

LOC I-RCA	APCH CRS	Rwy ldg / TDZE / Arpt Elev
110.3	307°	13,497 / 3192 / 3276

AL-343 [USAF]

ELLSWORTH AFB (KRCA)

* When ALS inop, increase RVR to 40 and vis to ¾ mile.
** When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.

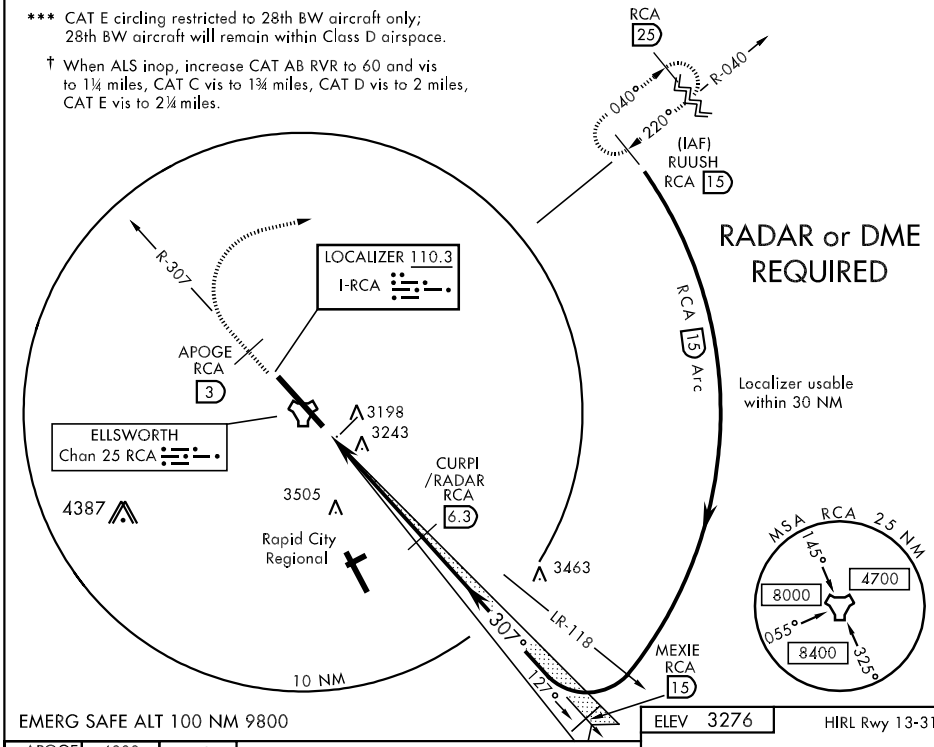
ALSF-1

MISSED APPROACH: Track outbound RCA R-307 to 3 DME (APOGE), then turn right to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

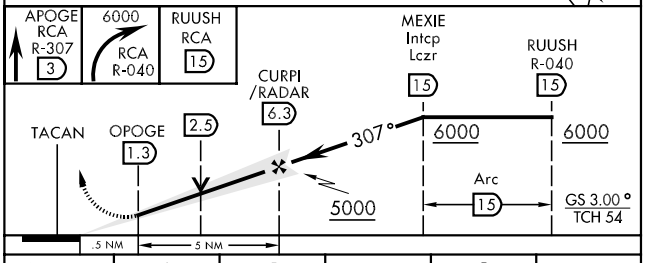
ATIS ★	ELLSWORTH APP CON	ELLSWORTH TOWER ★	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	

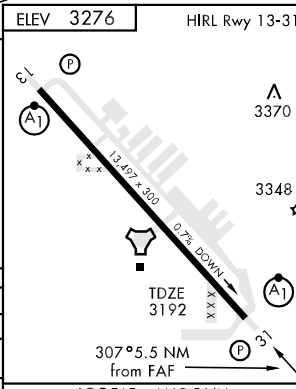
*** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.

† When ALS inop, increase CAT AB RVR to 60 and vis to 1¼ miles, CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.



EMERG SAFE ALT 100 NM 9800





CATEGORY	A	B	C	D	E
S-ILS 31 *	3392/24 200 (200-½)				
S-LOC/DME 31 **	3800/24 608 (600-½)		3800/60 608 (600-1¼)	3800-1½ 608 (600-1½)	3800-1¾ 608 (600-1¾)
CIRCLING***	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 31 †	3820/40 628 (600-¾)		3820/60 628 (600-1¼)	3820-1½ 628 (600-1½)	3820-1¾ 628 (600-1¾)

LOC FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

NC-1, 03 JUN 2010 to 01 JUL 2010

TACAN RWY 13

TACAN RCA Chan 25	APCH CRS 133°	Rwy ldg 13,497 TDZE 3276 Arpt Elev 3276	AL-343 [USAF]	ELLSWORTH AFB (KRCA)

* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, increase CAT CDE vis ½ mile.
** CAT E circling restricted to 28th BW aircraft only; 28th BW,aircraft will remain within Class D airspace.

ALSF-1

MISSED APPROACH: Track outbound RCA R-127 to 3 DME (CAVET), then turn left to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

ATIS ★	ELLSWORTH APP CON	ELLSWORTH TOWER ★	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	

†When ALS inop, increase CAT AB RVR to 60 and vis to 1¼ miles, increase CAT CDE vis ½ mile.

RCA 15 Arc
R-313
LR-321
GOHAR RCA 15
133°
3999
3214
KUDGE RCA 7.2
3449
3379
CAVET RCA 3
ELLSWORTH Chan 25 RCA
3505
4387
Rapid City Regional
R-127
3463
10 NM
RCA 25
R-040
040°
220°
(IAF) RUUSH RCA 15
4982
MSA RCA 25 NM
145°
4700
8000
055°
8400
325°
EMERG SAFE ALT 100 NM 9800

CAVET RCA R-127 3 | 6000 | RUUSH RCA R-040 15

RUUSH R-040 15
GOHAR R-313 15
KUDGE 7.2
TUTGE 1.9
TACAN
6000
6000
133°
3
5200
3.05°
TCH 62
RCA 15 Arc
5.3 NM
.5

ELEV 3276
A1
TDZE 3276
13
133° to TACAN
3370
13,497' × 300
0.7% DOWN
3348
A1
31
HIRL Rwy 13-31

CATEGORY	A	B	C	D	E
S-13 *	3820/24 544 (600-½)		3820/50 544 (600-1)	3820/60 544 (600-1¼)	3820-1½ 544 (600-1½)
CIRCLING **	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 13 †	3820/40 544 (600-¾)		3820/50 544 (600-1)	3820/60 544 (600-1¼)	3820-1½ 544 (600-1½)

NC-1, 03 JUN 2010 to 01 JUL 2010

TACAN RWY 31

TACAN RCA Chan 25	APCH CRS 299°	Rwy ldg 13,497 TDZE 3192 Arpt Elev 3276

AL-343 [USAF]

ELLSWORTH AFB (KRCA)

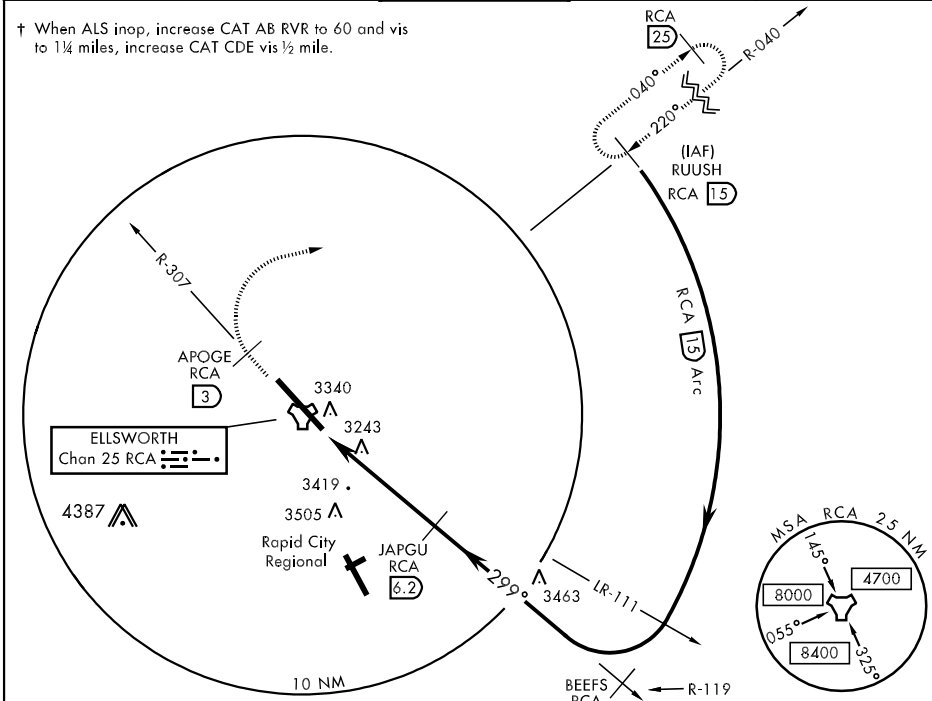
* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, increase CAT CDE vis ½ mile.
** CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.

ALSF-1

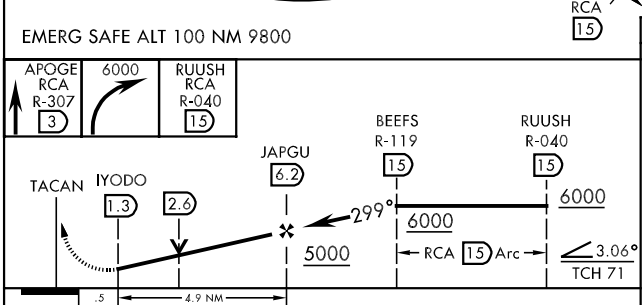
MISSED APPROACH: Track outbound RCA R-307 to 3 DME (APOGE), then turn right to join RCA R-040 outbound to (RUUSH) RCA 15 DME and hold. Maintain 6000.

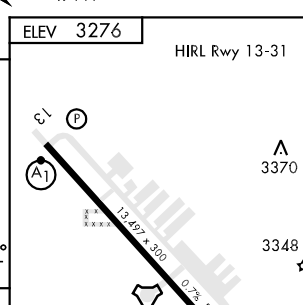
ATIS ★	ELLSWORTH APP CON	ELLSWORTH TOWER ★	GND CON	ASR
120.625 269.9	119.5 259.1	126.05 253.5	121.8 275.8	

† When ALS inop, increase CAT AB RVR to 60 and vis to 1¼ miles, increase CAT CDE vis ½ mile.



EMERG SAFE ALT 100 NM 9800



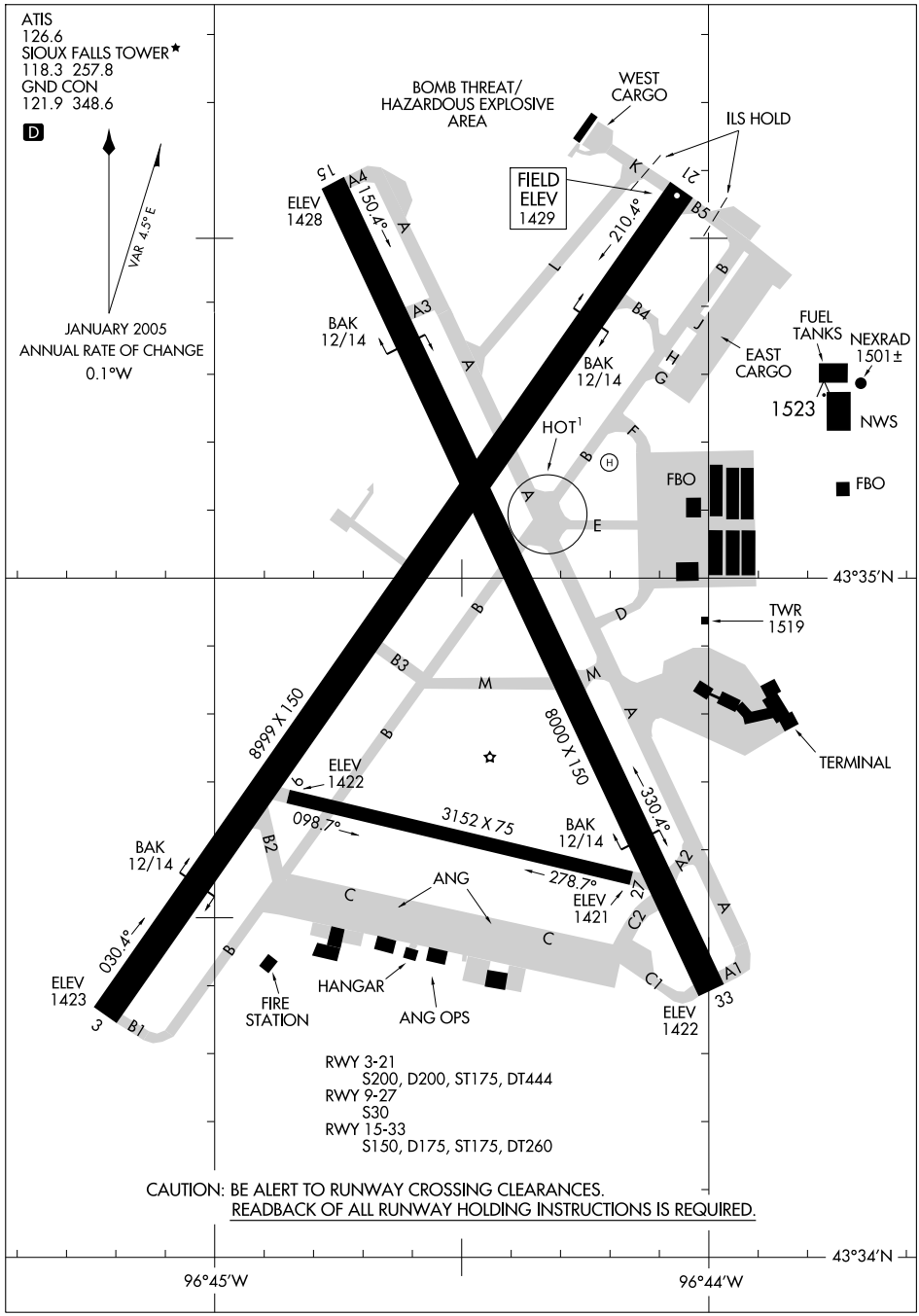


CATEGORY	A	B	C	D	E
S-31 *	3820/24 628 (600-½)		3820/60 628 (600-1¼)	3820-1½ 628 (600-1½)	3820-1¾ 628 (600-1¾)
CIRCLING **	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1¾ 604 (700-1¾)	3880-2 604 (700-2)	4040-2¾ 764 (800-2¾)
S-ASR 31 †	3820/40 628 (600-¾)		3820/60 628 (600-1¼)	3820-1½ 628 (600-1½)	3820-1¾ 628 (600-1¾)

AIRPORT DIAGRAM

AL-396 (FAA)

SIOUX FALLS/JOE FOSS FIELD (FSD)
SIOUX FALLS, SOUTH DAKOTA



HI-ILS or LOC RWY 3

SIOUX FALLS/JOE FOSS FIELD (KFSD)

LOC I-FSD	APCH CRS	Rwy ldg / TDZE / Arpt Elev
109.9	030°	8999 / 1423 / 1429

JAL-396 [USAF]

* RVR 1800 authorized with the use of Flight Director or Auto Pilot or Heads Up Display to DA. When ALS inop, increase CAT E vis to ¾ mile.

MALSR

MISSED APPROACH: Climb to 3400, then climbing left turn to 5000 via heading 240° and via FSD VORTAC R-269 to FRYRE (FSD 15 DME) and hold.

ATIS	SIOUX FALLS APP CON	SIOUX FALLS TOWER ★	GND CON	ASR
126.6	125.8 126.9 353.6	118.3 L 257.8	121.9 348.6	

** When ALS inop, increase CAT E vis to 1¾ mile.

SIOUX FALLS 115.0 FSD Chan 97

FRYRE FSD 15 2675

R-269 089° 269°

FSD 25

LOCALIZER 109.9 I-FSD

1527 1640 1665 3444 2442 1785

MAREY INT FSD R-167

† When local altimeter setting not received, use Brookings Regional altimeter setting and increase all DA 131′ and all MDA 140′, increase S-ILS CAT CDE RVR to 4000, S-LOC CAT C RVR to 6000, CAT D vis to 1½ miles, CAT E vis to 1¾ miles, Circling CAT C vis to 2 miles, CAT D vis to 2½ miles.

When ALS inop (while using Brookings Regional altimeter), increase S-ILS CAT E vis to 1 mile, and S-LOC CAT E vis to 1¾ miles.

MAREY INT minimums NA when using Brookings Regional altimeter setting.

030° HETBO FSD 20

LOM ROKKY 245 FS

DME REQUIRED

20 NM

MSA FSD 2.5 NM 4500

YANKTON 5000 038° (17.1)

210° 015° (IAF) SKIES FSD 35

015° 195°

Max holding 265 KIAS

R-195

ENROUTE FACILITIES

EMERG SAFE ALT 100 NM 4600 FROM "FSD" VORTAC

ELEV 1429

TDZL/CL Rwy 21
REIL Rwy 15-33
MIRL Rwy 9-27
HIRL Rwy 3-21 and 15-33

8999 × 150 8000 × 150 3152 × 75 1519

TDZE 1423

1470

030° 5.7 NM from FAF

3400 5000 hdg 240° FRYRE FSD 15

SKIES R-195 35 HETBO Intcp Lczr 20 ROKKY LOM 3334 MAREY INT FSD R-167

FL180 015° 030° 5000 3400 1940 LOC

GS 3.00° TCH 54

10.8 NM 4.3 NM 1.4 NM

CATEGORY	C	D	E
S-ILS 3 *†	1623/24 200 (200-½)		
S-LOC 3 **†	1940/50 517 (600-1)	1940/60 517 (600-1¼)	
CIRCLING †	1960-1½ 531 (600-1½)	2040-2 611 (700-2)	2300-3 871 (900-3)
MAREY FIX MINIMA			
S-LOC 3 †	1780/24 357 (400-½)	1780/40 357 (400-¾)	

FAF to MAP 5.7 NM					
Knots	120	140	160	180	200
Min:Sec	2:51	2:27	2:08	1:54	1:43

NC-1, 03 JUN 2010 to 01 JUL 2010

HI-ILS RWY 21

LOC I-JOU	APCH CRS	Rwy ldg / TDZE / Arpt Elev
111.1	210°	8999 / 1429 / 1429

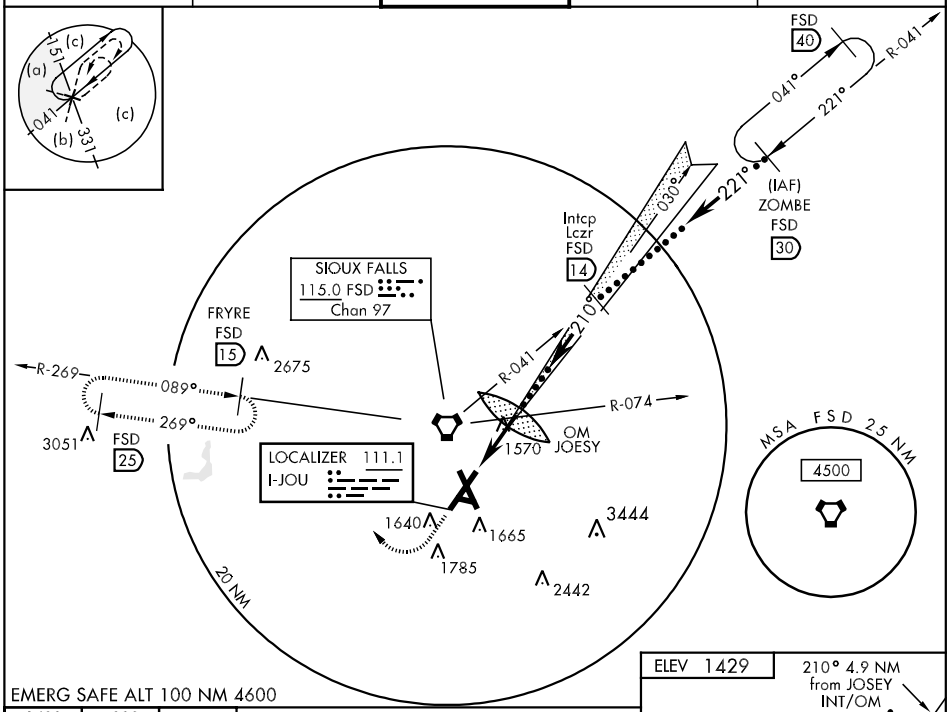
JAL-396 [USAF]

SIOUX FALLS/JOE FOSS FIELD (KFSD)

MALSR

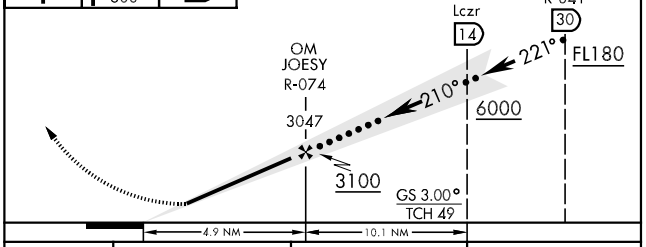
MISSED APPROACH: Climb to 3400 then climbing right turn to 5000 via heading 300° and FSD R-269 to FRYRE 15 DME and hold.

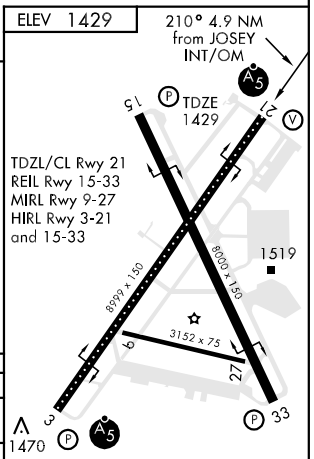
ATIS	SIOUX FALLS APP CON	SIOUX FALLS TOWER ★	GND CON	ASR
126.6	125.8 126.9 353.6	118.3 L 257.8	121.9 348.6	



EMERG SAFE ALT 100 NM 4600

3400	5000 hdg 300°	FRYRE FSD 15





CATEGORY	C	D	E
S-ILS 21	1629/18 200 (200-⅜)		1629/24 200 (200-½)
S-LOC 21	1920/40 491 (500-¾)	1920/50 491 (500-1)	1920/60 491 (500-1¼)
CIRCLING	1960-1½ 531 (600-1½)	2040-2 611 (700-2)	2300-3 871 (900-3)

FAF to MAP 4.9 NM					
Knots	120	140	160	180	200
Min:Sec	2:27	2:06	1:50	1:38	1:28

NC-1, 03 JUN 2010 to 01 JUL 2010

VORTAC FSD 115.0 Chan 97	APCH CRS 147°	Rwy ldg 8000 TDZE 1428 Arpt Elev 1429

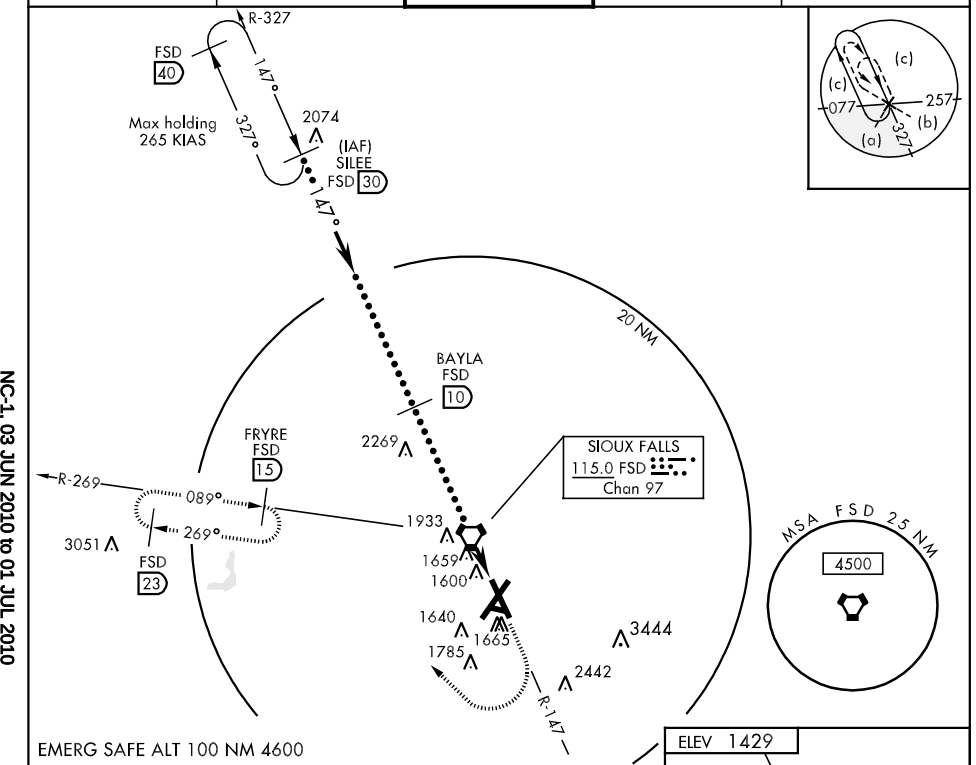
JAL-396 [USAF]

HI-TACAN RWY 15

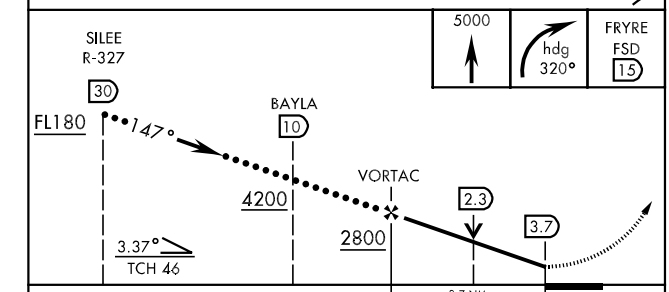
SIOUX FALLS/JOE FOSS FIELD (KFSD)

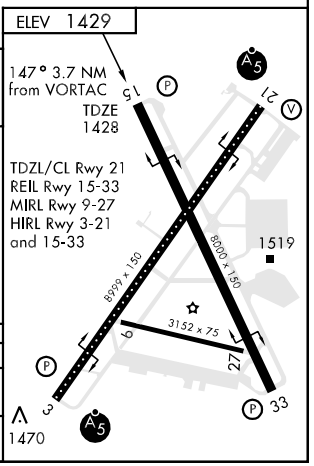
MISSED APPROACH: Climb to 5000 then right turn via heading 320° and FSD R-269 to FRYRE 15 DME and hold.

ATIS	SIOUX FALLS APP CON	SIOUX FALLS TOWER ★	GND CON	ASR
126.6	125.8 126.9 353.6	118.3 257.8	121.9 348.6	



EMERG SAFE ALT 100 NM 4600





CATEGORY	C	D	E
S-15	1920-1¼ 492 (500-1¼)	1920-1½ 492 (500-1½)	1920-1¾ 492 (500-1¾)
CIRCLING	1960-1½ 531 (600-1½)	2040-2 611 (700-2)	2300-3 871 (900-3)

LOC I-FSD	APP CRS	Rwy ldg	8999
109.9	030°	TDZE	1423
		Apt Elev	1429

ILS or LOC RWY 3

SIOUX FALLS/JOE FOSS FIELD (FSD)

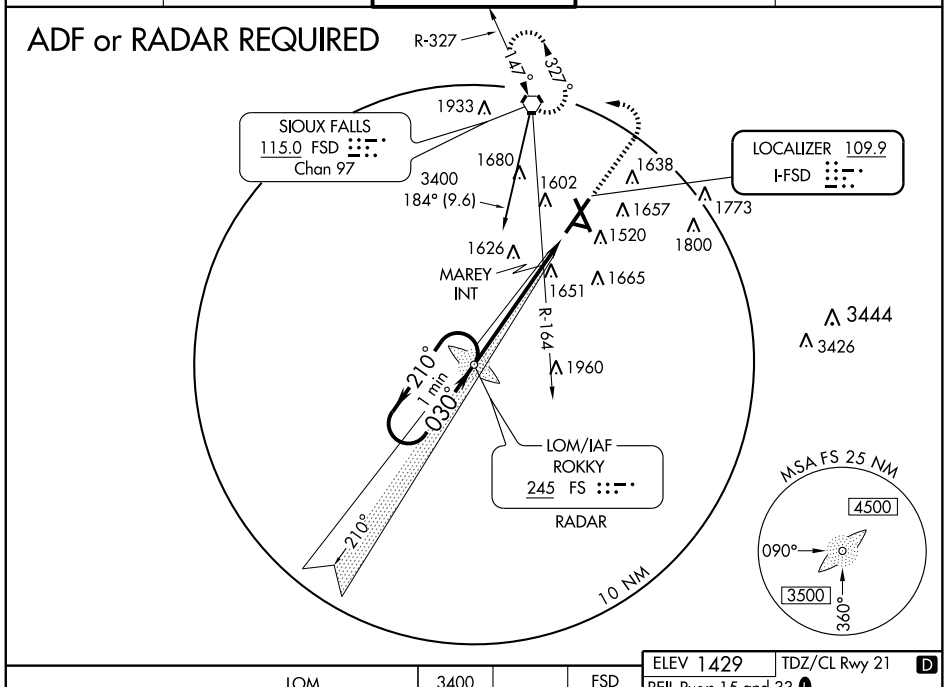
ASR

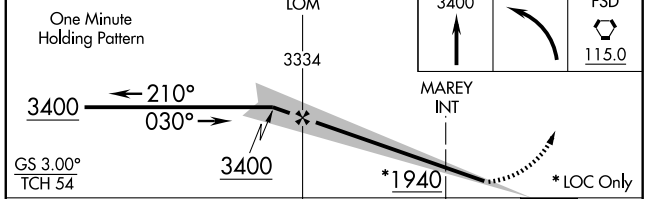
RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 3400 then left turn direct FSD VORTAC and hold.

ATIS	SIOUX FALLS APP CON ★	SIOUX FALLS TOWER ★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95

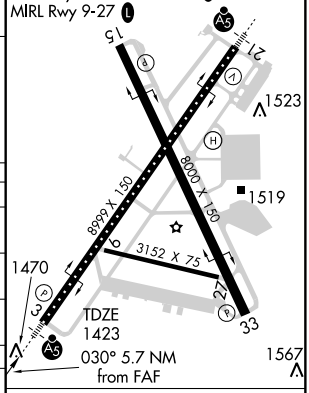




CATEGORY	A	B	C	D
S-ILS 3	# 1623/24 200 (200-½)			
S-LOC 3	1940/24 517 (600-½)		1940/50 517 (600-1)	1940/60 517 (600-1¼)
CIRCLING	1960-1 531 (600-1)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)
MAREY FIX MINIMUMS				
S-LOC 3	1780/24 357 (400-½)			1780/40 357 (400-¾)
CIRCLING	1960-1 531 (600-1)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)

ELEV 1429 | TDZ/CL Rwy 21 | D

REIL Rwys 15 and 33 L
HIRL Rwys 3-21 and 15-33 L
MIRL Rwy 9-27 L



FAF to MAP 5.7 NM

Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

NC-1. 03 JUN 2010 to 01 JUL 2010

LOC I-JOU	APP CRS	Rwy ldg	8999
111.1	210°	TDZE	1429
		Apt Elev	1429

ILS or LOC RWY 21

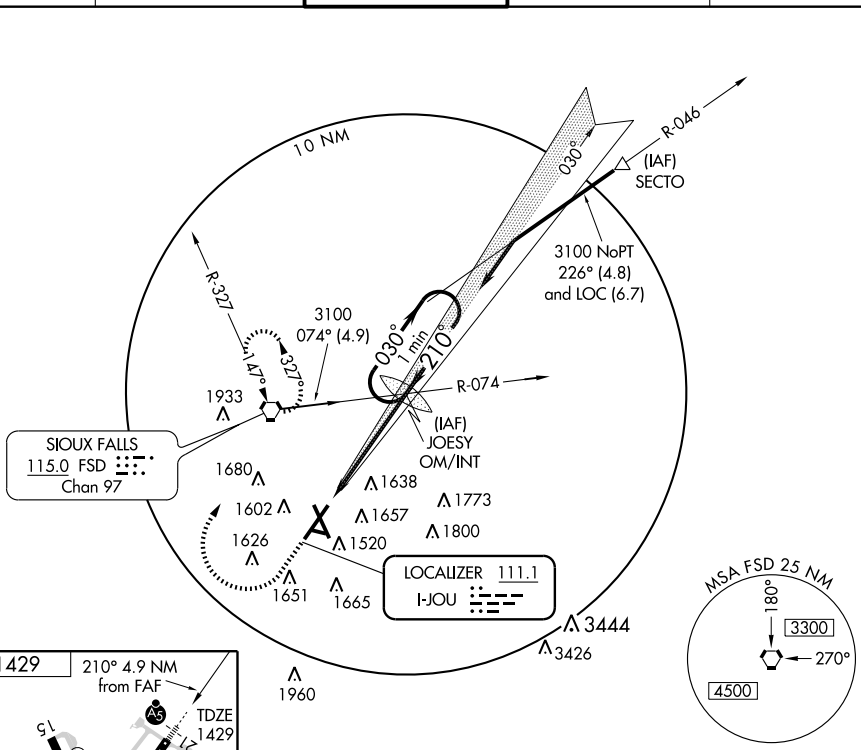
SIOUX FALLS/JOE FOSS FIELD (FSD)

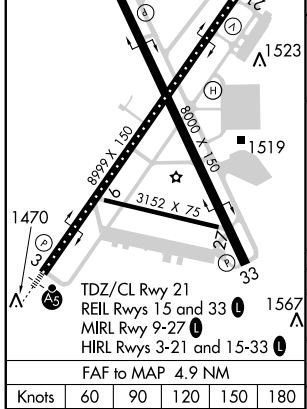
ASR

MALSR

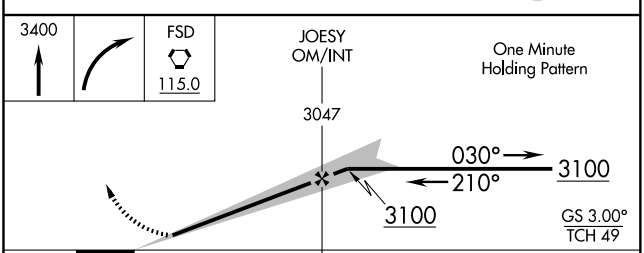
MISSED APPROACH: Climb to 3400 then right turn direct FSD VORTAC and hold.

ATIS	SIOUX FALLS APP CON★	SIOUX FALLS TOWER★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95





FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38



CATEGORY	A	B	C	D
S-ILS 21	1629/18 200 (200-½)			
S-LOC 21	1920/24 491 (500-½)		1920/40 491 (500-¾)	1920/50 491 (500-1)
CIRCLING	1960-1 531 (600-1)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	8999
030°	TDZE	1423
	Apt Elev	1429

RNAV (GPS) RWY 3

SIOUX FALLS/JOE FOSS FIELD (FSD)

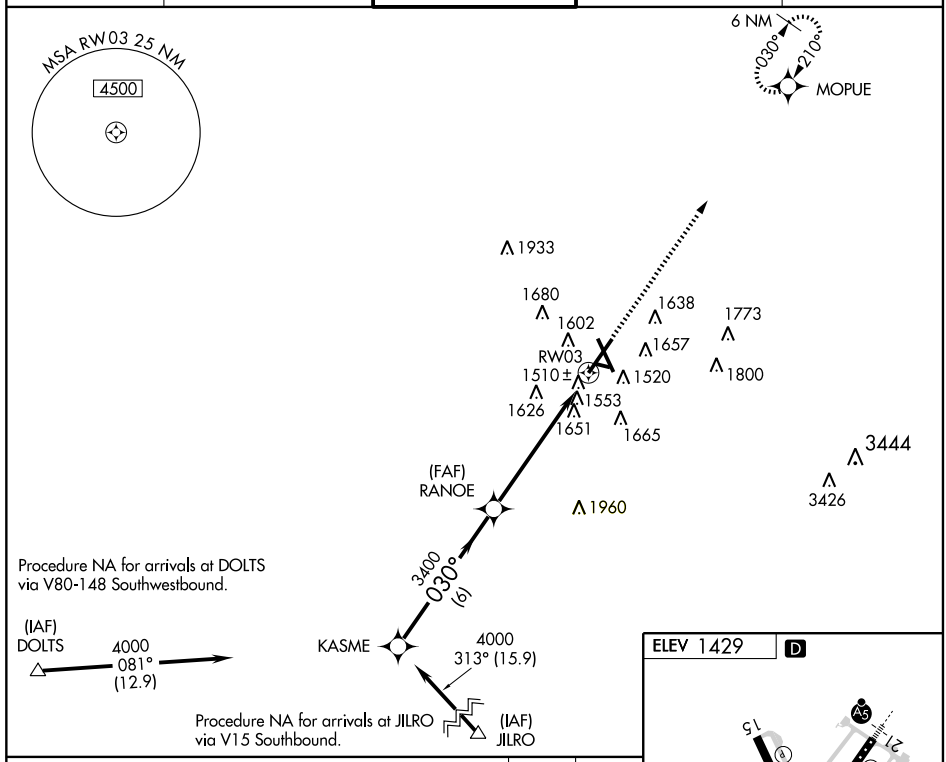
T
A NA
ASR

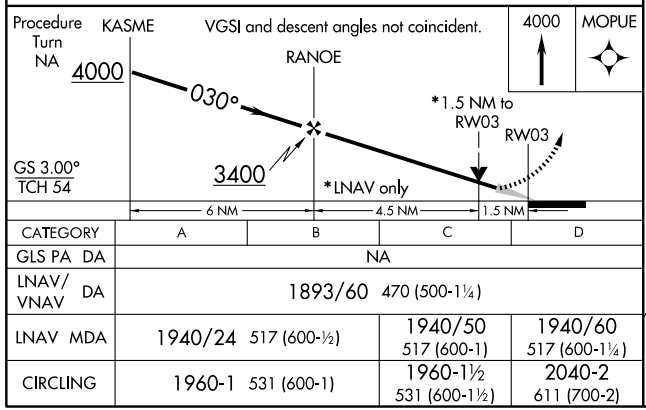
Baro-VNAV NA below -17°C (2°F).
DME/DME RNP- 0.3 NA.

MALSR
A5

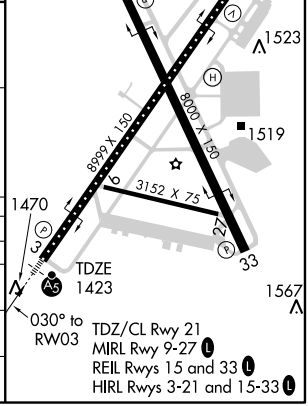
MISSED APPROACH: Climb to 4000 direct MOPUE WP and hold.

ATIS	SIOUX FALLS APP CON★	SIOUX FALLS TOWER★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95





CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/VNAV DA	1893/60 470 (500-1¼)			
LNAV MDA	1940/24 517 (600-½)		1940/50 517 (600-1)	1940/60 517 (600-1¼)
CIRCLING	1960-1 531 (600-1)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)



NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	3152
098°	TDZE	1423
	Apt Elev	1429

RNAV (GPS) RWY 9

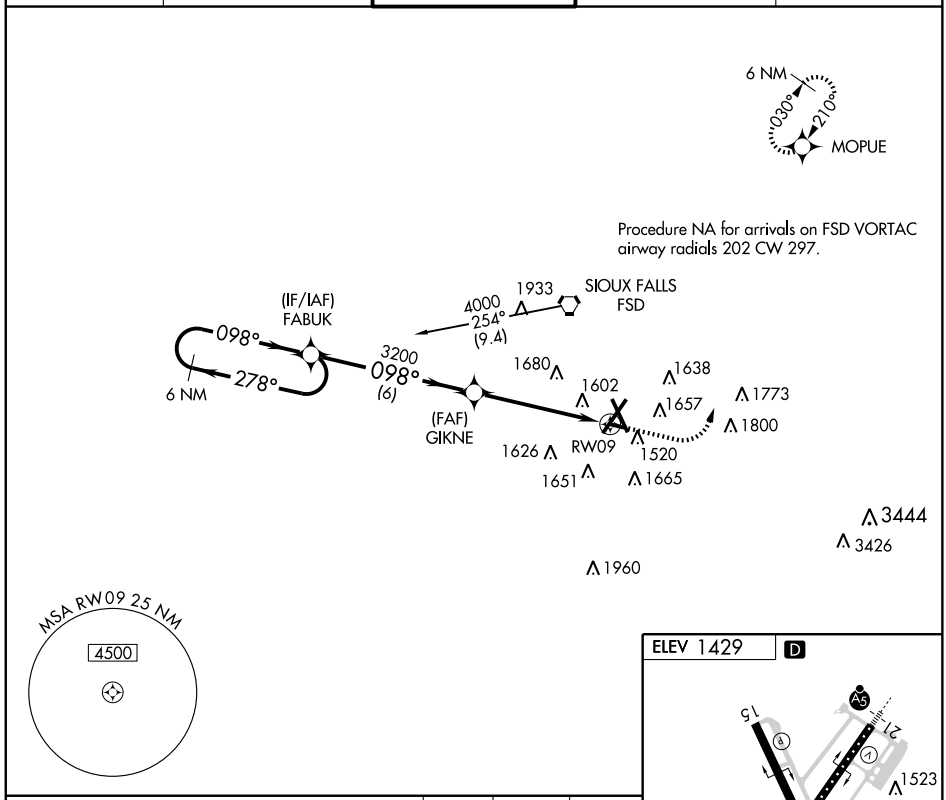
SIOUX FALLS/JOE FOSS FIELD (FSD)

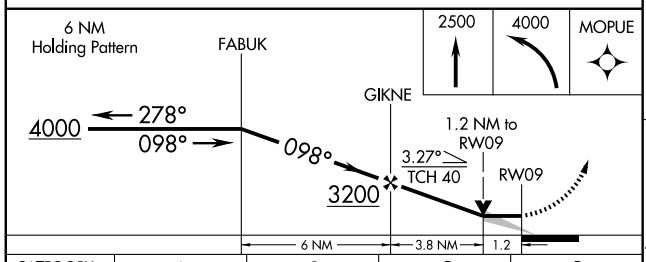
T
A NA
ASR

DME/DME RNP- 0.3 NA.

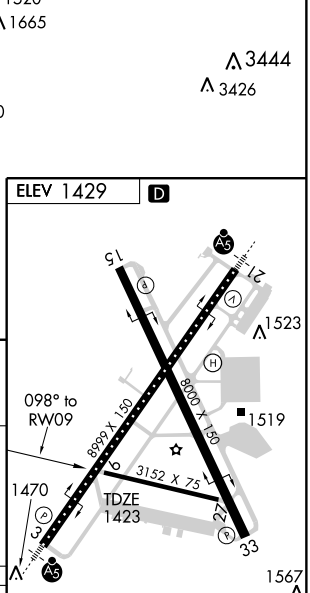
MISSED APPROACH: Climb to 2500 then climbing left turn to 4000 direct MOPUE WP and hold.

ATIS	SIOUX FALLS APP CON★	SIOUX FALLS TOWER★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95





CATEGORY	A	B	C	D
LNAV MDA	1880-1 457 (500-1)		NA	
CIRCLING	1960-1 531 (600-1)		NA	



TDZ/CL Rwy 21
MIRL Rwy 9-27 L
REIL Rwys 15 and 33 L
HIRL Rwys 3-21 and 15-33 L

NC-1. 03 JUN 2010 to 01 JUL 2010

RNAV (GPS) RWY 15
SIOUX FALLS/JOE FOSS FIELD (FSD)

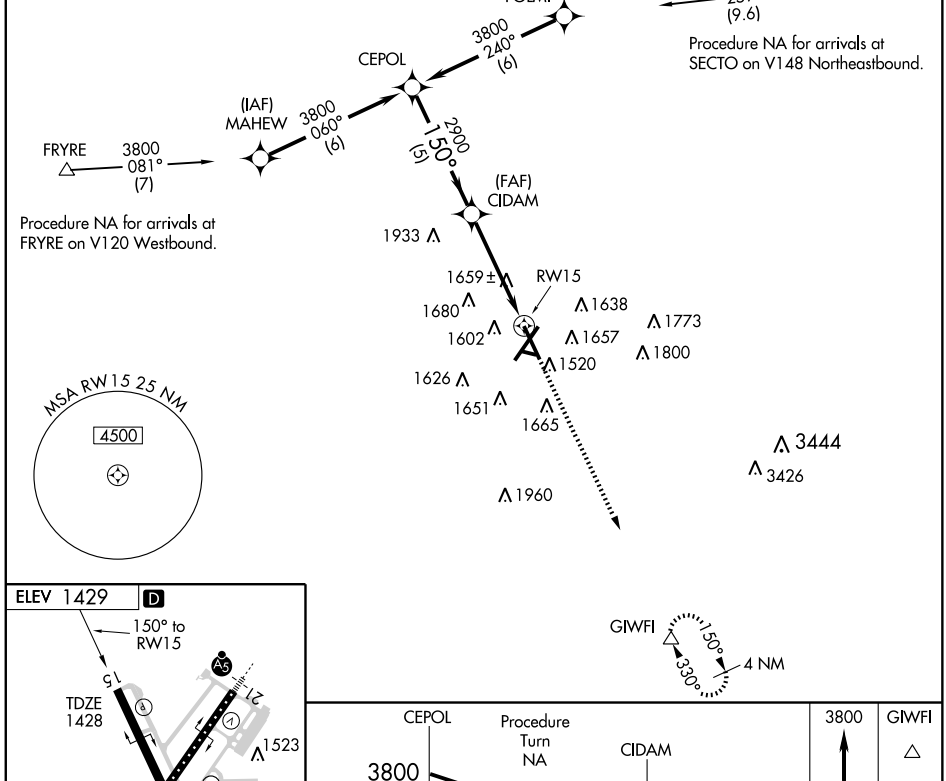
APP CRS	Rwy ldg	8000
150°	TDZE	1428
	Apt Elev	1429

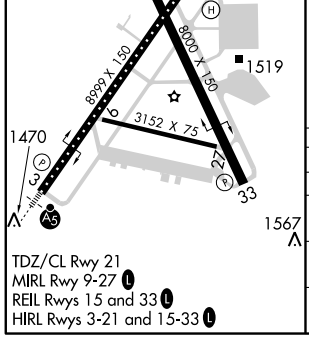
T
NA
ASR

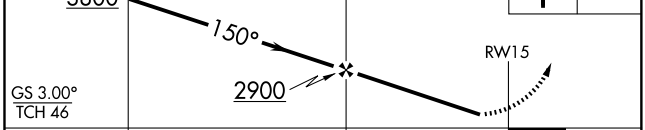
DME/DME RNP-0.3 NA.
Baro-VNAV NA below -17°C (2°F).

MISSED APPROACH: Climb to 3800 direct GIWFI WP and hold.

ATIS	SIOUX FALLS APP CON ★	SIOUX FALLS TOWER ★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95







CATEGORY	A	B	C	D	E
GLS PA DA	NA				
LNAV/VNAV DA	1893-1¾ 465 (500-1¾)				
LNAV MDA	1920-1 492 (500-1)		1920-1¼ 492 (500-1¼)	1920-1½ 492 (500-1½)	1920-1¾ 492 (500-1¾)
CIRCLING	1960-1 531 (600-1)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)	2300-3 871 (900-3)

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	8999
210°	TDZE	1429
	Apt Elev	1429

RNAV (GPS) RWY 21
SIOUX FALLS/JOE FOSS FIELD (FSD)

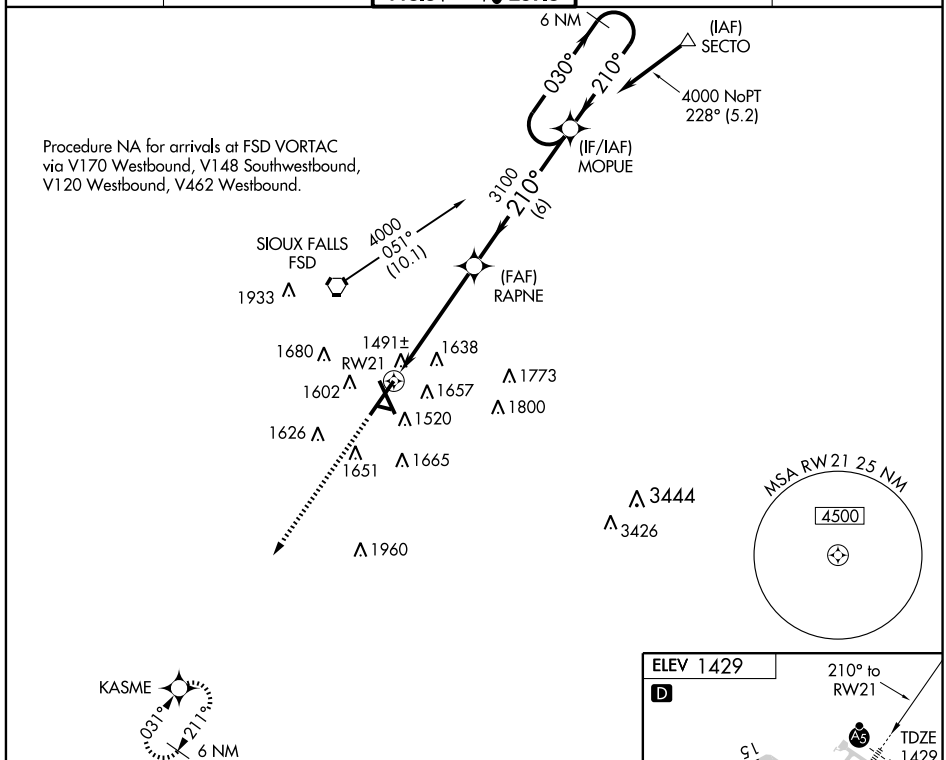
T A NA ASR

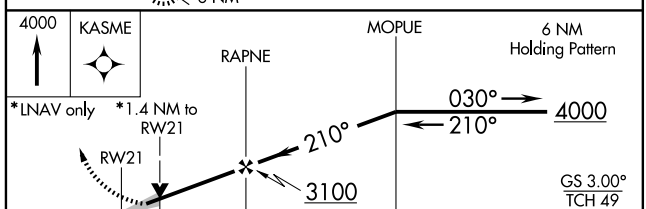
DME/DME RNP-0.3 NA.
Baro-VNAV NA below -17°C (2°F).

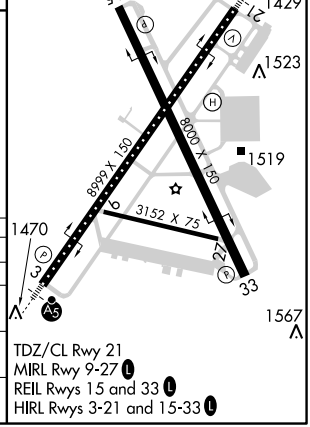
MALSR A5

MISSED APPROACH: Climb to 4000 direct KASME WP and hold.

ATIS	SIOUX FALLS APP CON	SIOUX FALLS TOWER*	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95







CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/VNAV DA	1760/40 331 (400-¾)			
LNAV MDA	1940/24 511 (600-½)		1940/50 511 (600-1)	
CIRCLING	1960-1¼ 531 (600-1¼)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)

TDZ/CL Rwy 21
MIRL Rwys 9-27 L
REIL Rwys 15 and 33 L
HIRL Rwys 3-21 and 15-33 L

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	3152
272°	TDZE	1423
	Apt Elev	1429

RNAV (GPS) RWY 27

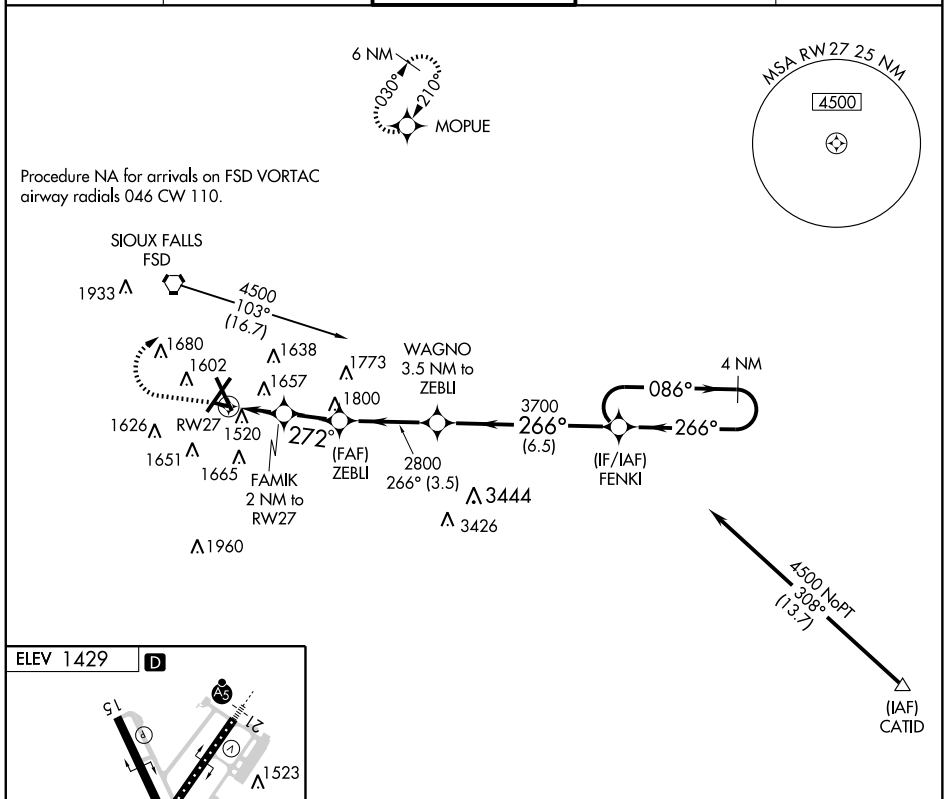
SIOUX FALLS/JOE FOSS FIELD (FSD)

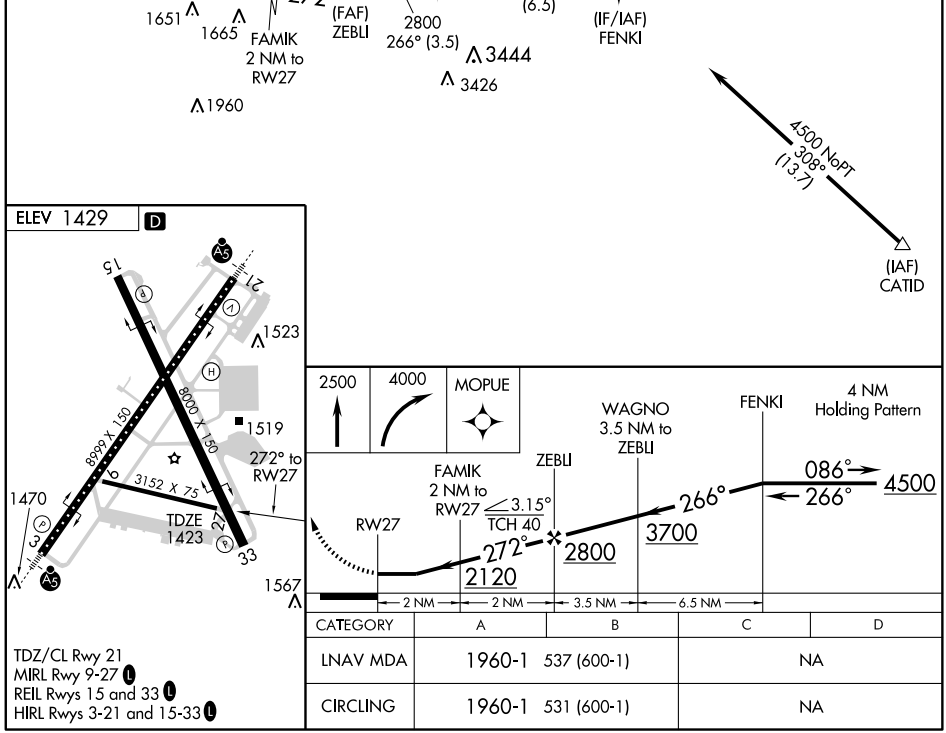
T
A NA
ASR

DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 2500, then climbing right turn to 4000 direct MOPUE WP and hold.

ATIS	SIOUX FALLS APP CON★	SIOUX FALLS TOWER★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95





TDZ/CL Rwy 21
MIRL Rwy 9-27 L
REIL Rwys 15 and 33 L
HIRL Rwys 3-21 and 15-33 L

CATEGORY	A	B	C	D
LNAV MDA	1960-1 537 (600-1)		NA	
CIRCLING	1960-1 531 (600-1)		NA	

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	8000
330°	TDZE	1423
	Apt Elev	1429

RNAV (GPS) RWY 33

SIOUX FALLS/JOE FOSS FIELD (FSD)

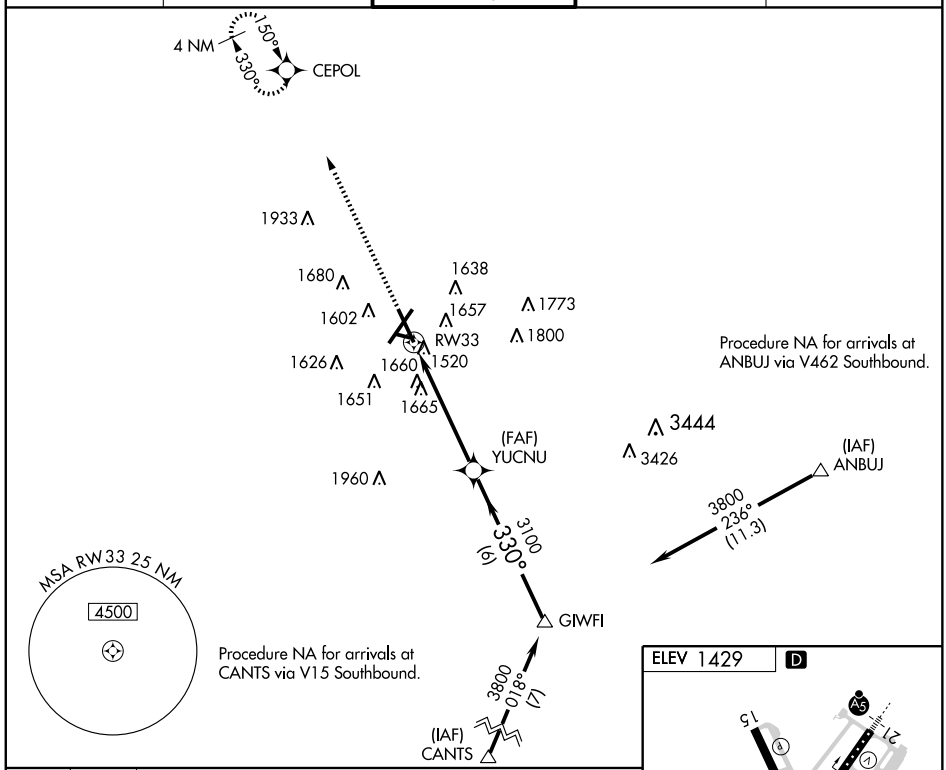
NA

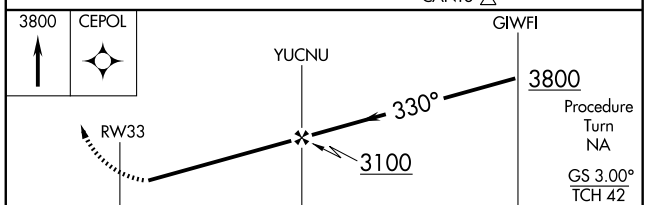
ASR

DME/DME RNP-0.3 NA.
Baro-VNAV NA below -17°C (2°F).

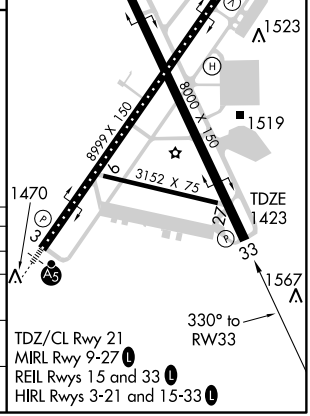
MISSED APPROACH: Climb to 3800 direct CEPOL WP and hold.

ATIS	SIOUX FALLS APP CON ★	SIOUX FALLS TOWER ★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95





CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/VNAV DA	1964-2 541 (600-2)			
LNAV MDA	1920-1 497 (500-1)		1920-1¼ 497 (500-1¼)	1920-1½ 497 (500-1½)
CIRCLING	1960-1 531 (600-1)		1960-1½ 531 (600-1½)	2040-2 611 (700-2)



NC-1. 03 JUN 2010 to 01 JUL 2010

VORTAC FSD	APP CRS	Rwy ldg	8000
115.0	326°	TDZE	1423
Chan 97		Apt Elev	1429

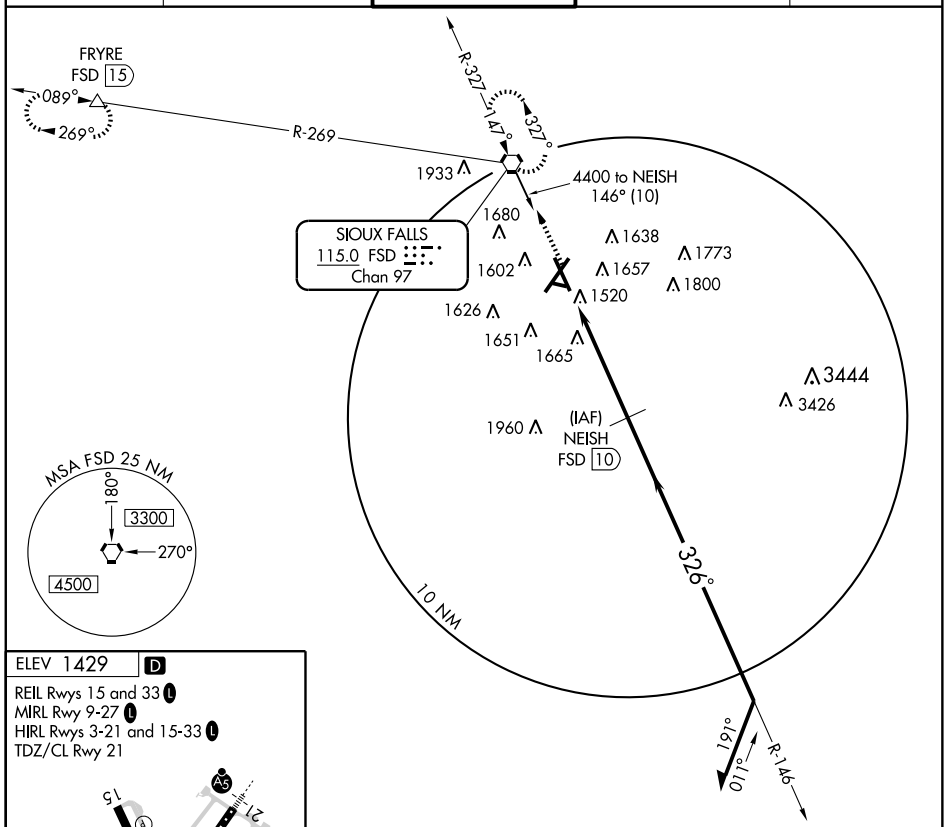
VOR/DME or TACAN RWY 33

SIOUX FALLS/JOE FOSS FIELD (FSD)

ASR

MISSED APPROACH: Climb to 3400 direct FSD VORTAC and hold. (TACAN aircraft continue climb to 5000 via FSD R-269 to FRYRE 15 DME and hold west, right turns, 089° inbound.)

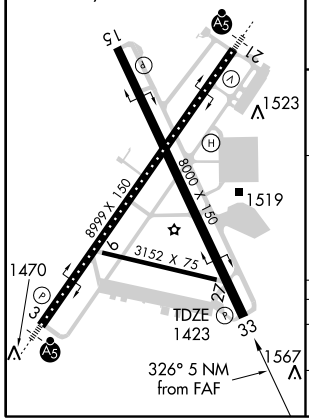
ATIS	SIOUX FALLS APP CON★	SIOUX FALLS TOWER★	GND CON	UNICOM
126.6	125.8 353.6	118.3 (CTAF) L 257.8	121.9 348.6	122.95

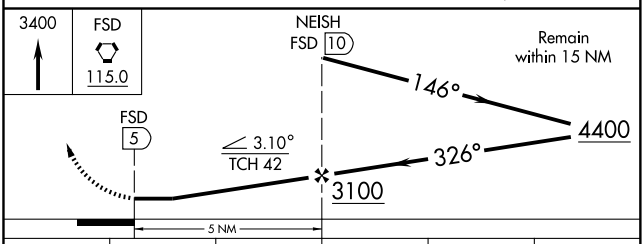


NC-1, 03 JUN 2010 to 01 JUL 2010

ELEV 1429 D

REIL Rwys 15 and 33 L
MIRL Rwy 9-27 L
HIRL Rwys 3-21 and 15-33 L
TDZ/CL Rwy 21





CATEGORY	A	B	C	D	E
S-33	1940-1	517 (600-1)	1940-1½ 517 (600-1½)	1940-1¾	517 (600-1¾)
CIRCLING	1960-1	531 (600-1)	1960-1½ 531 (600-1½)	2040-2 611 (700-2)	2300-3 871 (900-3)

VORTAC FSD	APP CRS	Rwy ldg	8000
115.0	147°	TDZE	1428
Chan 97		Apt Elev	1429

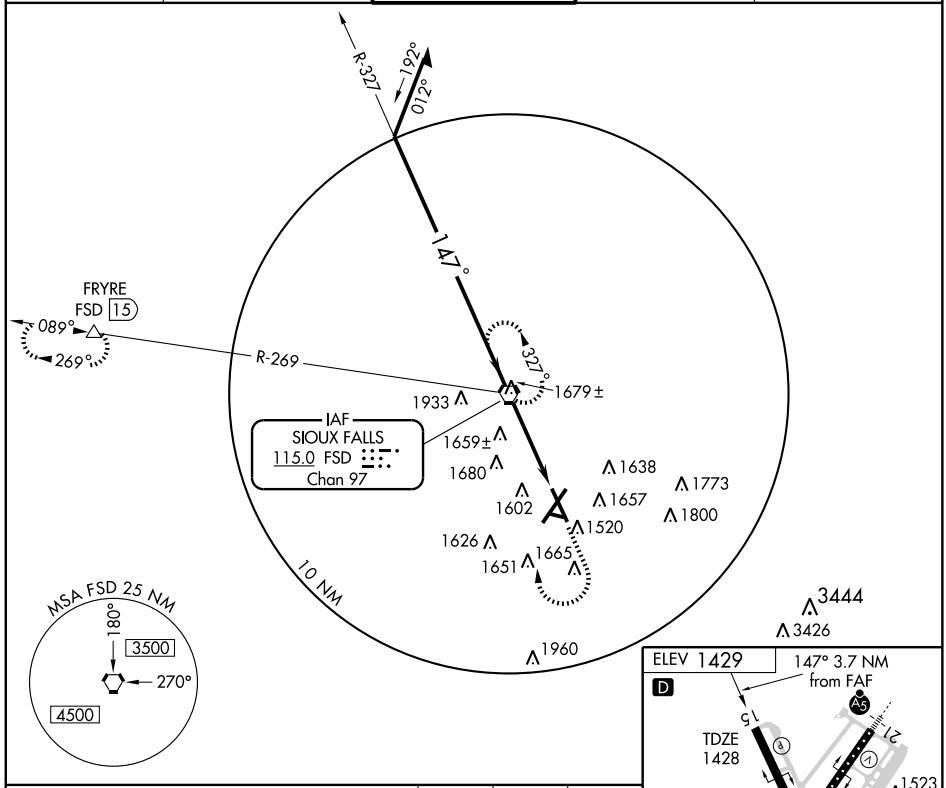
VOR or TACAN RWY 15

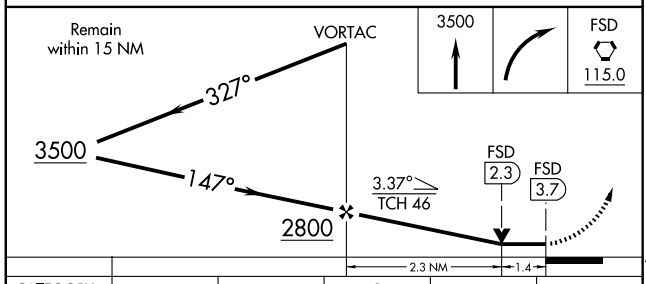
SIOUX FALLS/JOE FOSS FIELD (FSD)

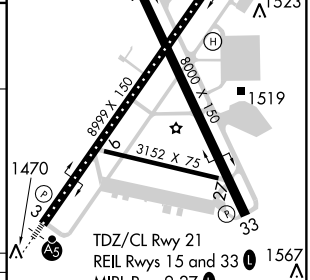
ASR

MISSED APPROACH: Climb to 3500 then right turn direct FSD VORTAC and hold. (TACAN aircraft continue climb to 5000 via FSD R-269 to FRYRE 15 DME and hold west, right turns, 089° inbound)

ATIS	SIOUX FALLS APP CON★	SIOUX FALLS TOWER★	GND CON	UNICOM
126.6	125.8 353.6	118.3(CTAF)L 257.8	121.9 348.6	122.95







CATEGORY	A	B	C	D	E
S-15	1920-1	492 (500-1)	1920-1¼ 492 (500-1¼)	1920-1½ 492 (500-1½)	1920-1¾ 492 (500-1¾)
CIRCLING	1960-1	531 (600-1)	1960-1½ 531 (600-1½)	2040-2 611 (700-2)	2300-3 871 (900-3)

FAF to MAP 3.7 NM

Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	6400
114°	TDZE	3888
	Apt Elev	3931

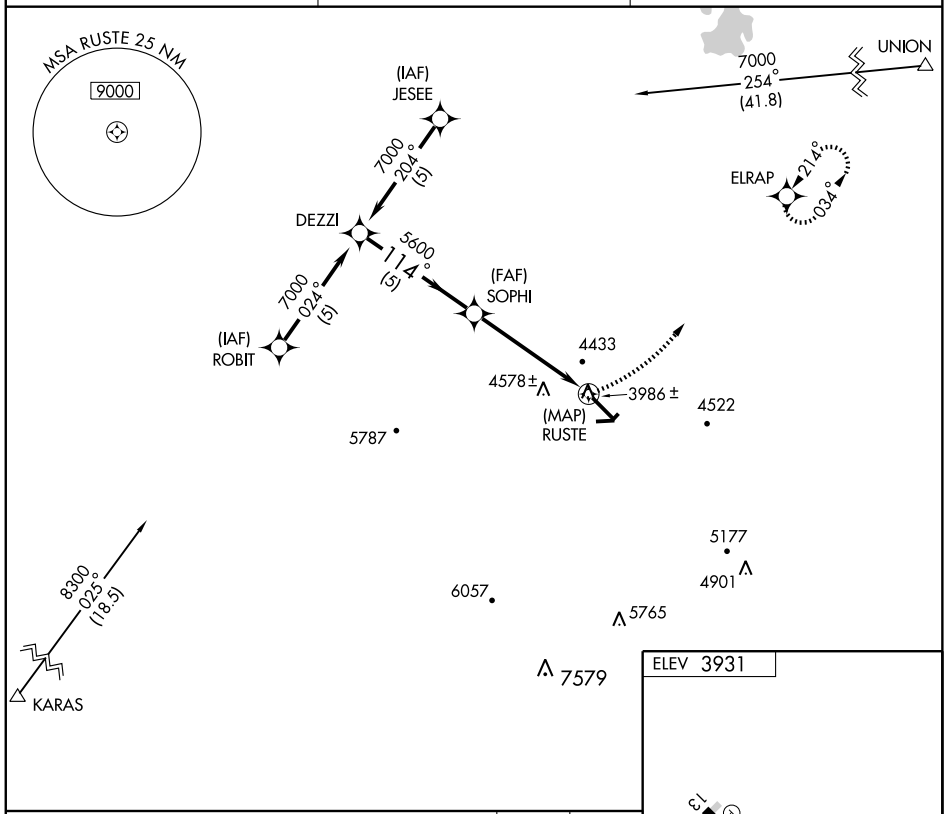
GPS RWY 13

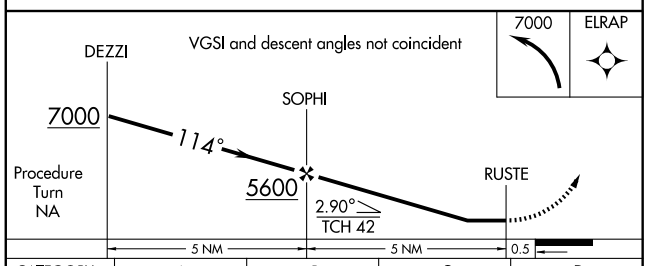
SPEARFISH/ BLACK HILLS-CLYDE ICE FIELD (SPF)

T
NA

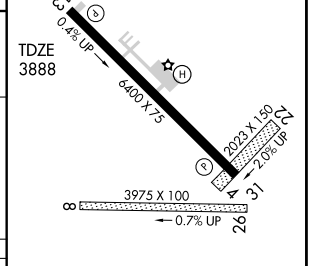
MISSED APPROACH: Climbing left turn to 7000 direct ELRAP WP and hold.

AWOS-3	ELLSWORTH APP CON*	UNICOM
118.325	119.5 259.1	122.7 (CTAF) L





CATEGORY	A	B	C	D
S-13	4740-1 852 (900-1)	4740-1¼ 852 (900-1¼)	NA	
CIRCLING	4800-1 869 (900-1)	4800-1¼ 869 (900-1¼)	NA	



NC-1. 03 JUN 2010 to 01 JUL 2010

NDB SPF 300	APP CRS 226°	Rwy ldg N/A TDZE N/A Apt Elev 3931

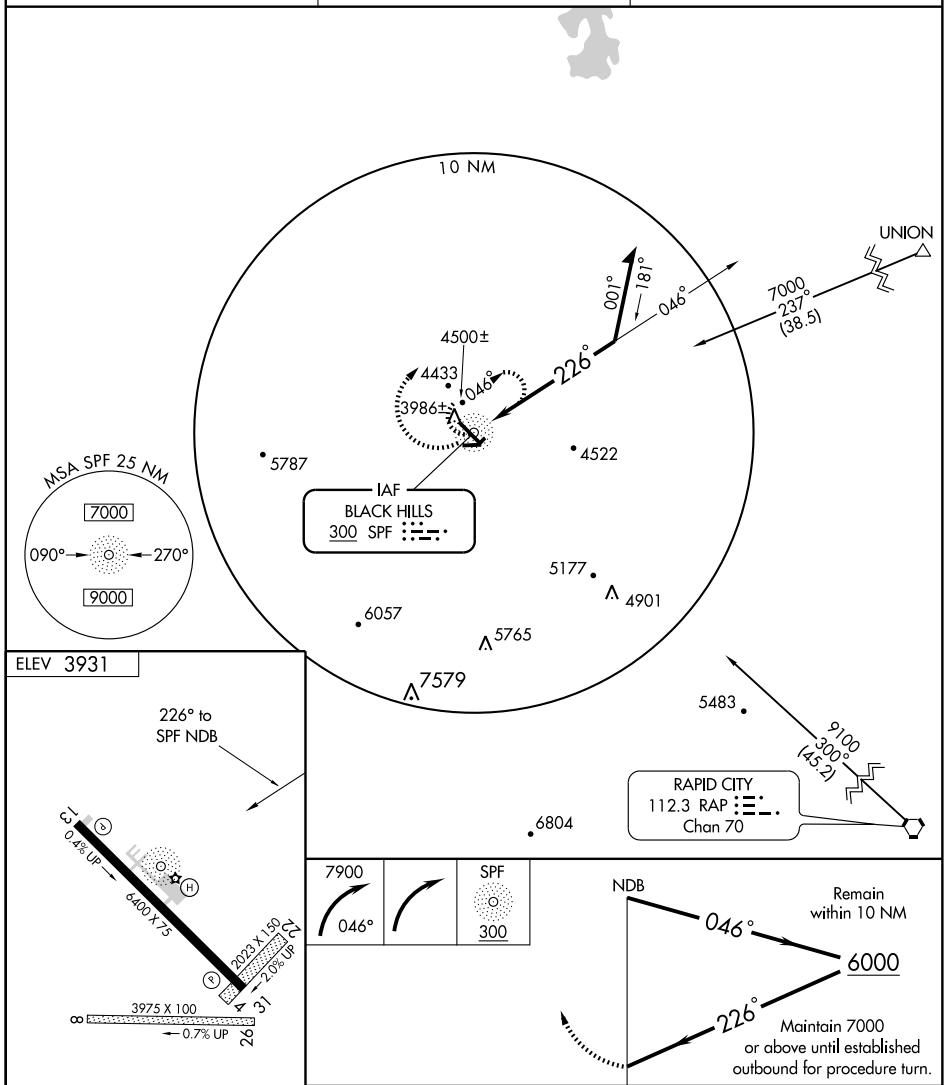
NDB or GPS-A

SPEARFISH/ BLACK HILLS-CLYDE ICE FIELD (SPF)

T
A NA

MISSED APPROACH: Climbing right turn to 7900 via heading 046° then right turn direct SPF NDB and hold.

AWOS-3	ELLSWORTH APP CON★	UNICOM
118.325	119.5 259.1	122.7 (CTAF) L



CATEGORY	A	B	C	D
CIRCLING	4860-1¼ 929 (1000-1¼)	4860-1½ 929 (1000-1½)	NA	

MIRL Rwy 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

APP CRS	Rwy ldg	5100
292°	TDZE	3228
	Apt Elev	3239

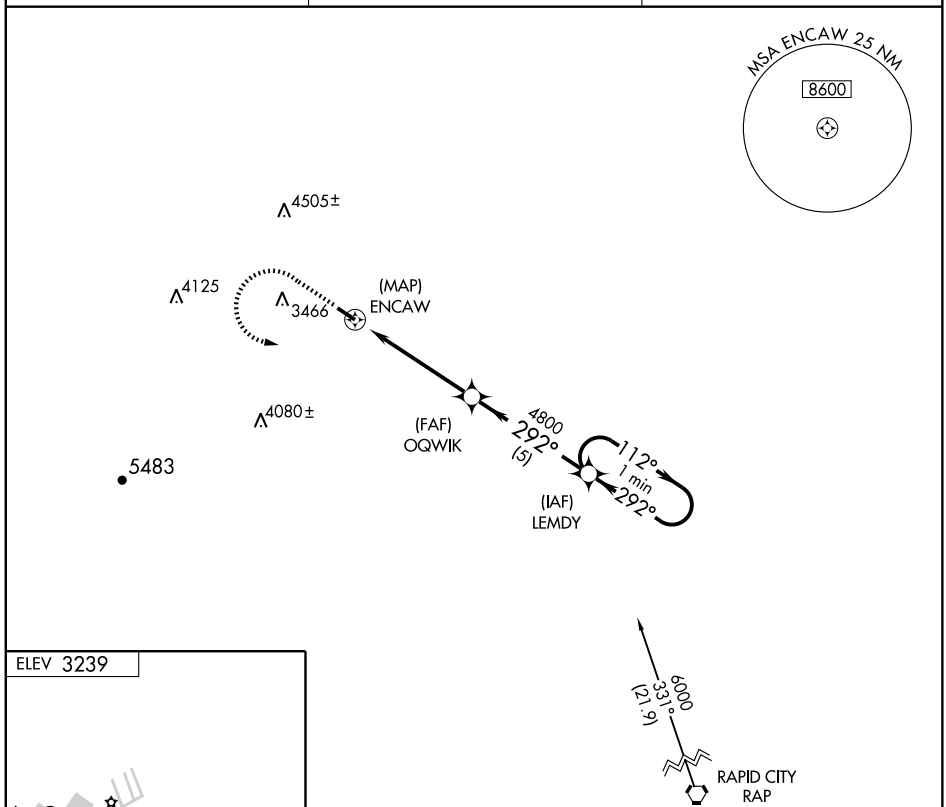
GPS RWY 29
STURGIS MUNI (49B)

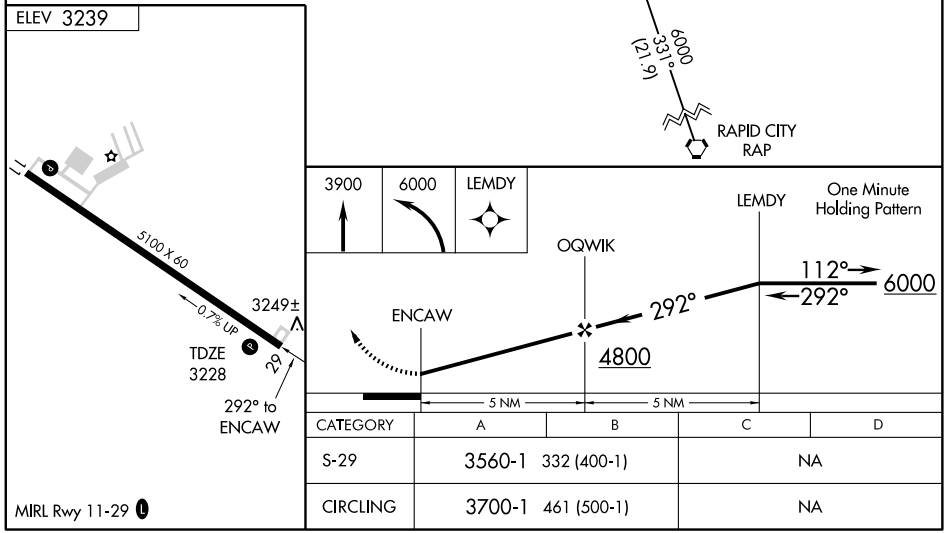
NA

Use Ellsworth AFB altimeter setting.

MISSED APPROACH: Climb to 3900 then climbing left turn to 6000 direct LEMDY WP and hold.

AWOS-A	ELLSWORTH APP CON ★	UNICOM
122.8	119.5 259.1	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-29	3560-1 332 (400-1)		NA	
CIRCLING	3700-1 461 (500-1)		NA	

MIRL Rwy 11-29 L

WAAS CH 53614 W30A	APP CRS 300°	Rwy ldg 4105 TDZE 1146 Apt Elev 1146

RNAV (GPS) RWY 30

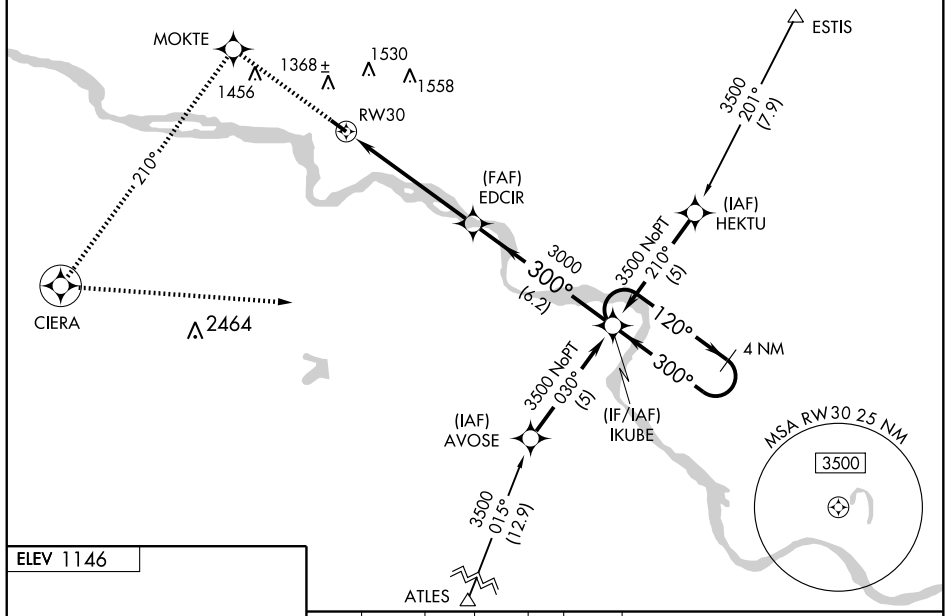
VERMILLION/HAROLD DAVIDSON FIELD (VMR)

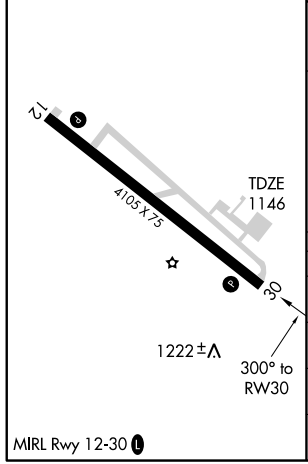
Baro-VNAV NA when using Yankton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Yankton altimeter setting and increase all DA 73 feet and LPV and LNAV/VNAV visibility ¼ mile all Cats, increase all MDA 80 feet and LNAV Cat C visibility ¼ mile and Circling Cat C visibility ½ mile.

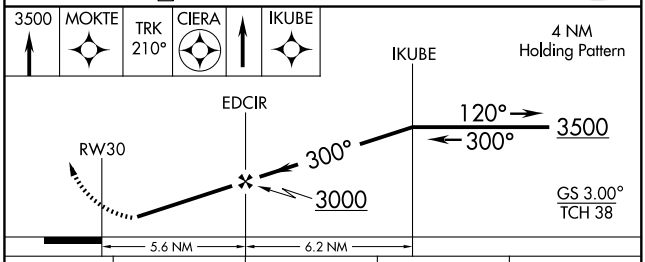
MISSED APPROACH: Climb to 3500 direct MOKTE and via track 210° to CIERA and direct IKUBE and hold.

AWOS-A	SIOUX CITY APP CON *	UNICOM
122.8	124.6 307.0	122.8 (CTAF) L

Procedure NA for arrivals at ESTIS via V15 northbound.







CATEGORY	A	B	C	D
LPV DA	1434-1 288 (300-1)			NA
LNAV/VNAV DA	1559-1½ 413 (500-1½)			NA
LNAV MDA	1680-1 534 (600-1)		1680-1½ 534 (600-1½)	NA
CIRCLING	1740-1 594 (600-1)		1740-1½ 594 (600-1½)	NA

NC-1. 03 JUN 2010 to 01 JUL 2010

LOC/DME I-ATY	APP CRS	Rwy ldg	6894
111.9	354°	TDZE	1745
Chan 56		Apt Elev	1749

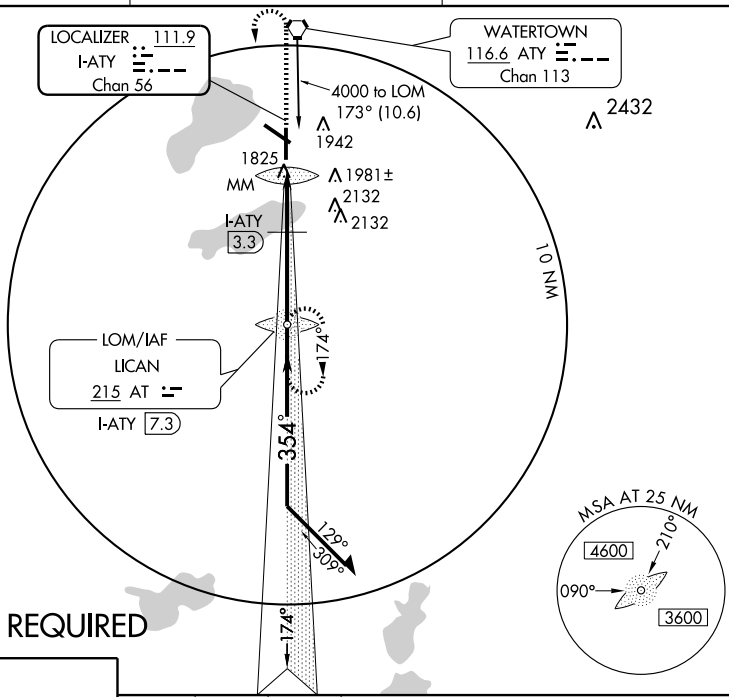
ILS or LOC RWY 35
WATERTOWN RGNL (ATY)

S-LOC 35 DME minimums, increase Cat D visibility ¼ mile for inoperative MALSR.

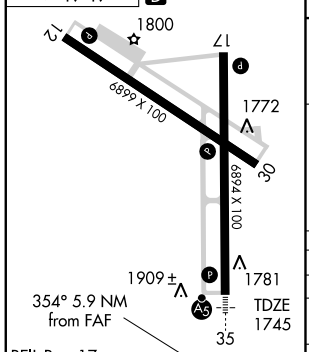
MALSR

MISSED APPROACH: Climb to 4000 then left turn direct LICAN LOM/I-ATY 7.3 DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF)

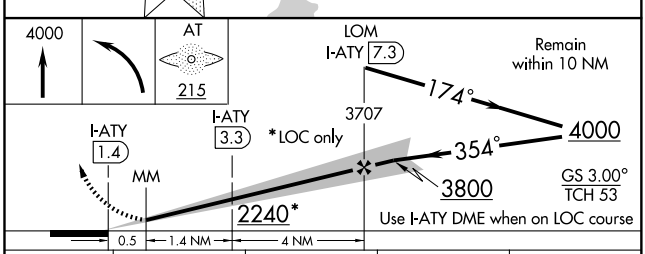


ADF or DME REQUIRED



REIL Rwy 17
REIL Rwys 12 and 30 L
HIRL Rwy 17-35 L
MIRL Rwy 12-30 L

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58



CATEGORY	A	B	C	D
S-ILS 35	1945-½ 200 (200-½)			
S-LOC 35	2240-½ 495 (500-½)		2240-¾ 495 (500-¾)	2240-1 495 (500-1)
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½)	2340-2 591 (600-2)
DME MINIMUMS				
S-LOC 35	2080-½ 335 (400-½)			2080-¾ 335 (400-¾)
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

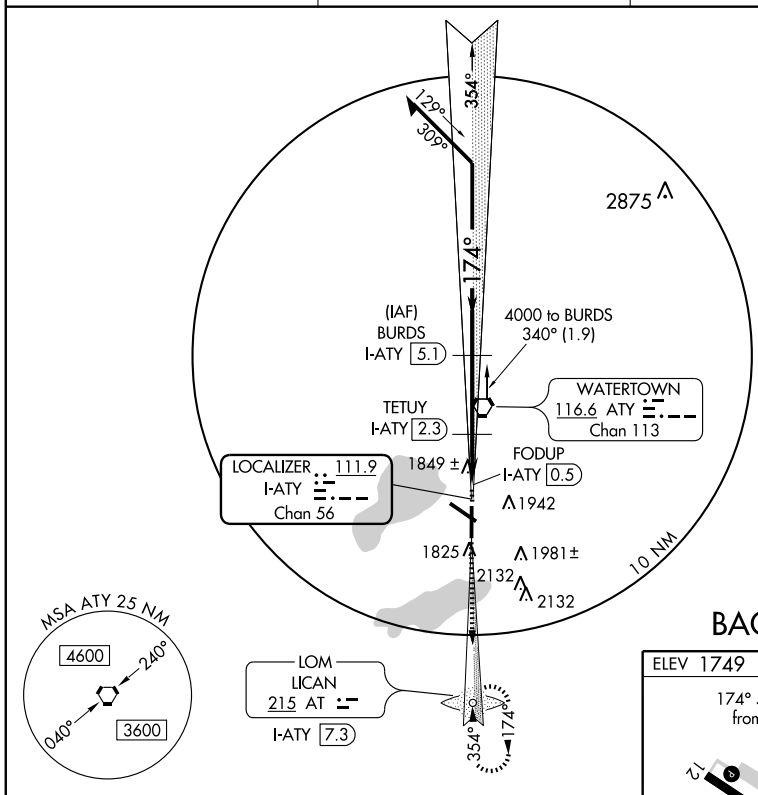
LOC/DME I-ATY	APP CRS	Rwy ldg	6894
111.9	174°	TDZE	1740
Chan 56		Apt Elev	1749

LOC/DME BC RWY 17
WATERTOWN RGNL (ATY)

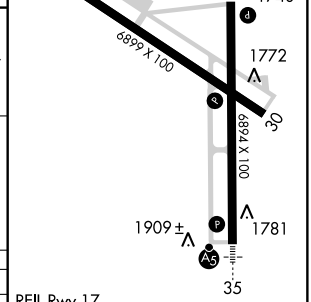
When local altimeter setting not received, use Brookings altimeter setting and increase all MDA 120 feet and increase all Cat C and D visibilities ¼ mile.

MISSED APPROACH: Climb to 4000 via I-ATY south course to LICAN LOM/I-ATY 7.3 DME and hold.

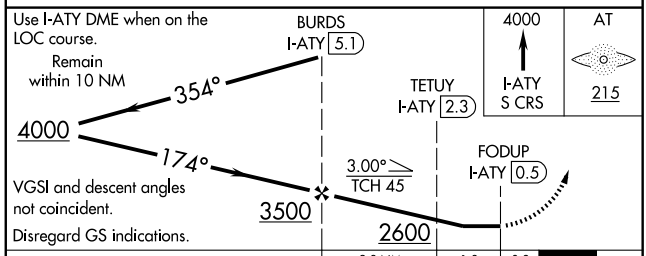
ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L



BACK COURSE



Use I-ATY DME when on the LOC course.
Remain within 10 NM



VGSI and descent angles not coincident.
Disregard GS indications.

CATEGORY	A	B	C	D
S-17	2120-1 380 (400-1)			2120-1¼ 380 (400-1¼)
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½)	2340-2 591 (600-2)

REIL Rwy 17
REIL Rwys 12 and 30 L
HIRL Rwy 17-35 L
MIRL Rwy 12-30 L

NC-1. 03 JUN 2010 to 01 JUL 2010

LOM AT	APP CRS	Rwy ldg	6894
215	354°	TDZE	1745
		Apt Elev	1749

NDB RWY 35

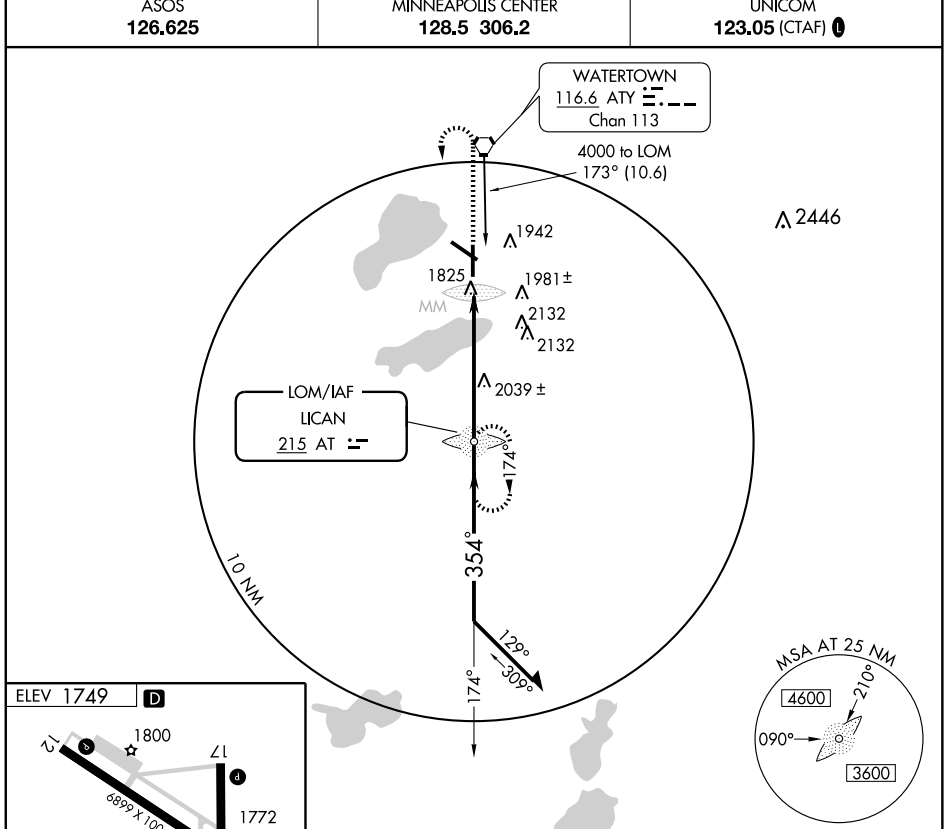
WATERTOWN RGNL (ATY)

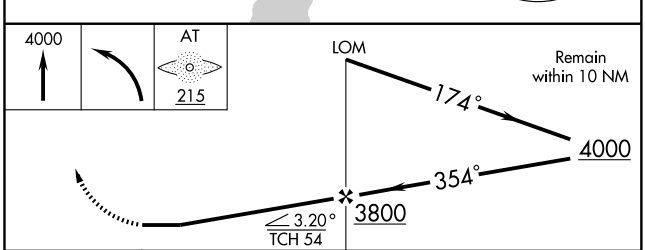
When local altimeter setting not received, use Brookings altimeter setting and increase all MDA 120 feet, increase S-35 Cat C/D visibility ½ mile, increase Circling Cat C visibility ½ mile and Cat D visibility ¼ mile. Inoperative table does not apply to S-35 Cat A and B.

MALSR

MISSED APPROACH: Climb to 4000 then left turn direct LICAN LOM and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L





FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

CATEGORY	A	B	C	D
S-35	2340-1 595 (600-1)			2340-1½ 595 (600-1½)
CIRCLING	2340-1 591 (600-1)		2340-1½ 591 (600-1½)	2340-2 591 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

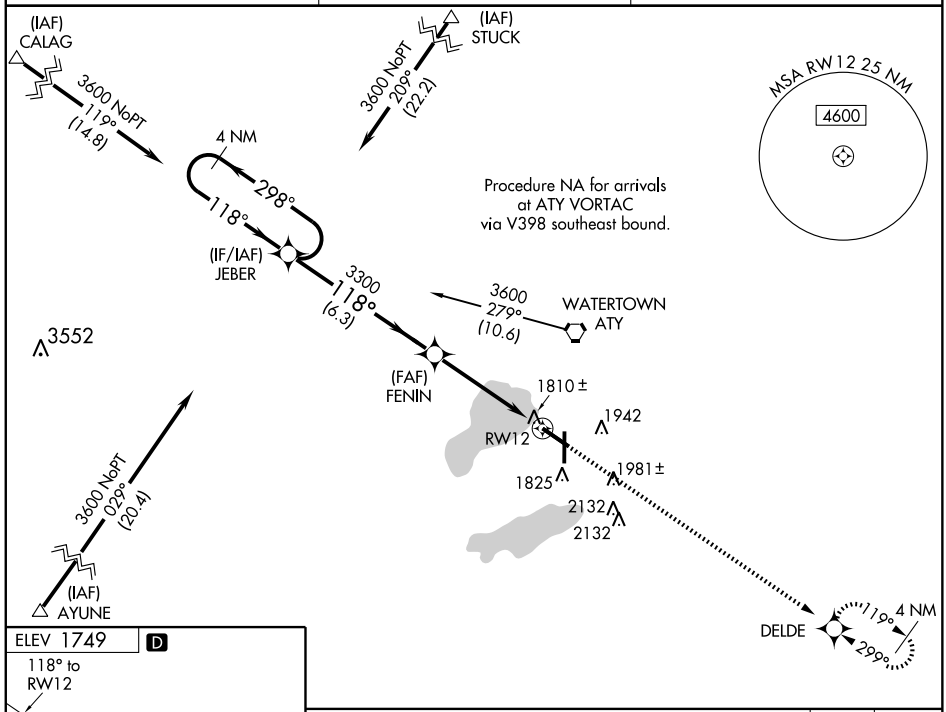
WAAS CH 53405 W12A	APP CRS 118°	Rwy ldg 6899 TDZE 1749 Apt Elev 1749

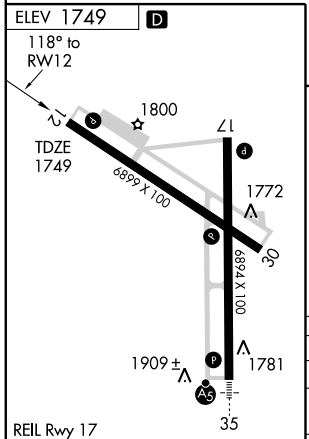
RNAV (GPS) RWY 12
WATERTOWN RGNL (ATY)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. If local altimeter setting not received, use Brookings altimeter setting and increase all DAs 105 feet and all MDAs 120 feet. VDP NA when using Brookings altimeter setting. Baro-VNAV NA when using Brookings altimeter setting.

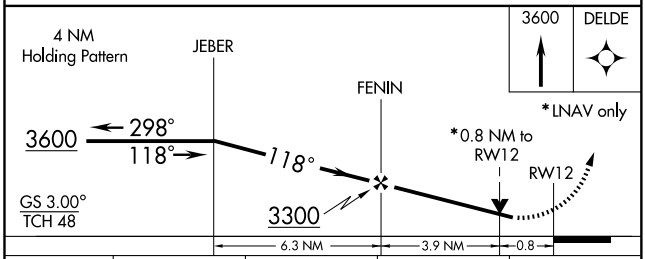
MISSED APPROACH: Climb to 3600 direct DELDE and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L





REIL Rwy 17
REIL Rwys 12 and 30 L
HIRL Rwy 17-35 L
MIRL Rwy 12-30 L



CATEGORY	A	B	C	D
LPV DA	2021-1 272 (300-1)			
LNAV/VNAV DA	2076-1¼ 327 (400-1¼)			
LNAV MDA	2060-1 311 (400-1)			
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

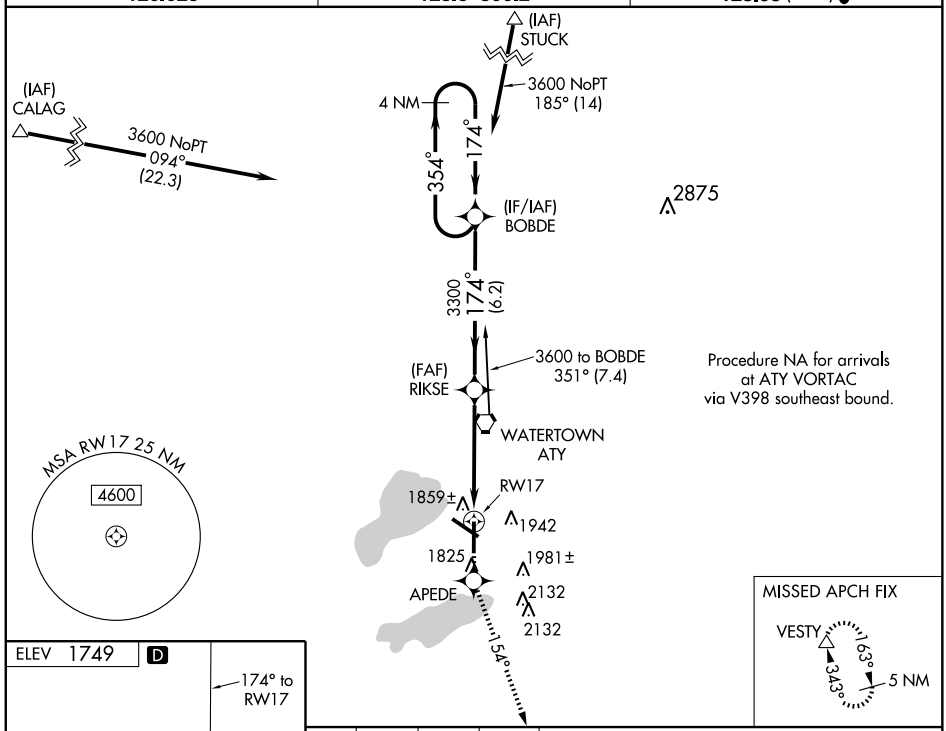
WAAS CH 82305 W17A	APP CRS 174°	Rwy ldg 6894 TDZE 1740 Apt Elev 1749

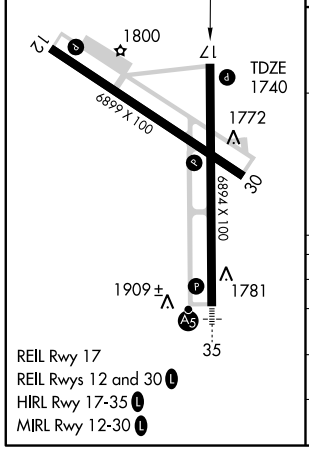
RNAV (GPS) RWY 17
WATERTOWN RGNL (ATY)

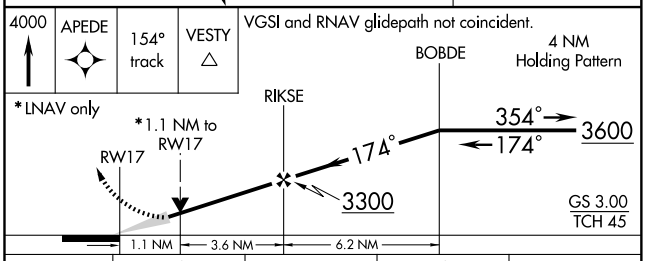
Baro-VNAV NA when using Brooking altimeter setting. DME/DME RNP-0.3 NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). VDP NA when using Brookings altimeter setting.
If local altimeter setting not received, use Brookings altimeter setting and increase all DAs 105 feet and all MDAs 120 feet.

MISSED APPROACH: Climb to 4000 direct APEDE and via 154° track to VESTY and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	2054-1 314 (400-1)			
LNAV/VNAV DA	2129-1¼ 389 (400-1¼)			
LNAV MDA	2120-1 380 (400-1)			2120-1¼ 380 (400-1¼)
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

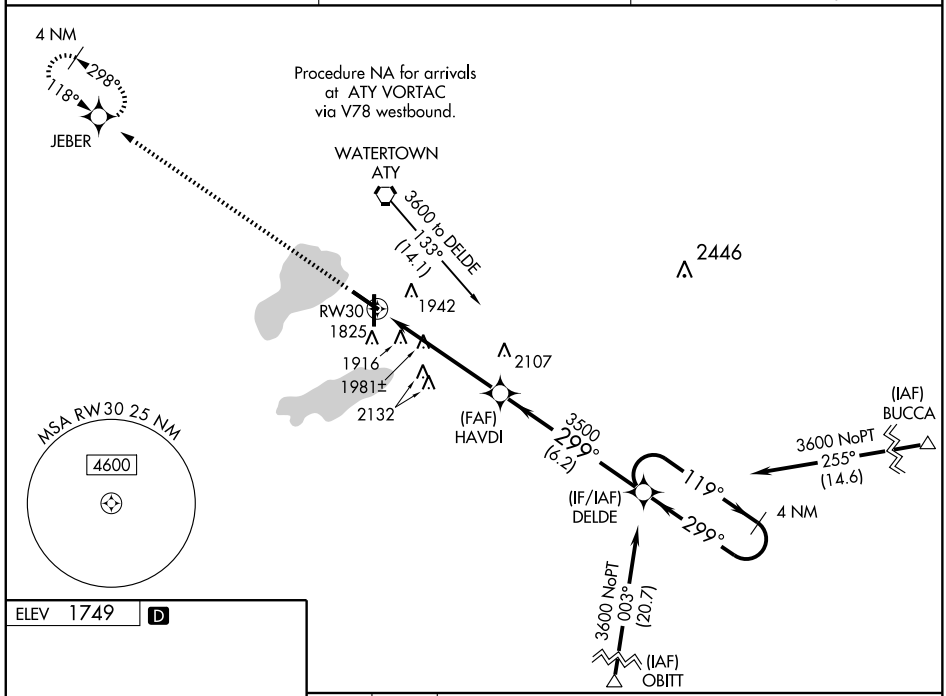
WAAS CH 50305 W30A	APP CRS 299°	Rwy ldg 6899 TDZE 1736 Apt Elev 1749

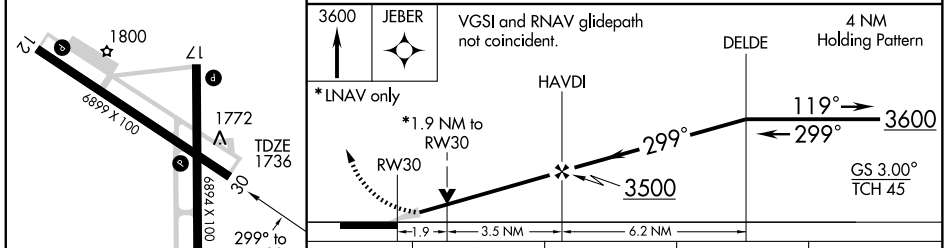
RNAV (GPS) RWY 30
WATERTOWN RGNL (ATY)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Brookings altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LPV and LNAV/VNAV all Cats. visibility ¼ mile, LNAV and Circling Cat. B visibility ¼ mile, Cat. C/D visibility ½ mile. VDP NA when using Brookings altimeter setting. Baro-VNAV NA when using Brookings altimeter setting.

MISSED APPROACH: Climb to 3600 direct JEBER and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1990-1 254 (300-1)			
LNAV/VNAV DA	2208-1¾ 472 (500-1¾)			
LNAV MDA	2360-1 624 (700-1)		2360-1¾ 624 (700-1¾)	2360-2 624 (700-2)
CIRCLING	2360-1 611 (700-1)		2360-1¾ 611 (700-1¾)	2360-2 611 (700-2)

REIL Rwy 17
REIL Rwys 12 and 30 L
HIRL Rwy 17-35 L
MIRL Rwy 12-30 L

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 82614 W35A	APP CRS 354°	Rwy ldg 6894 TDZE 1745 Apt Elev 1749

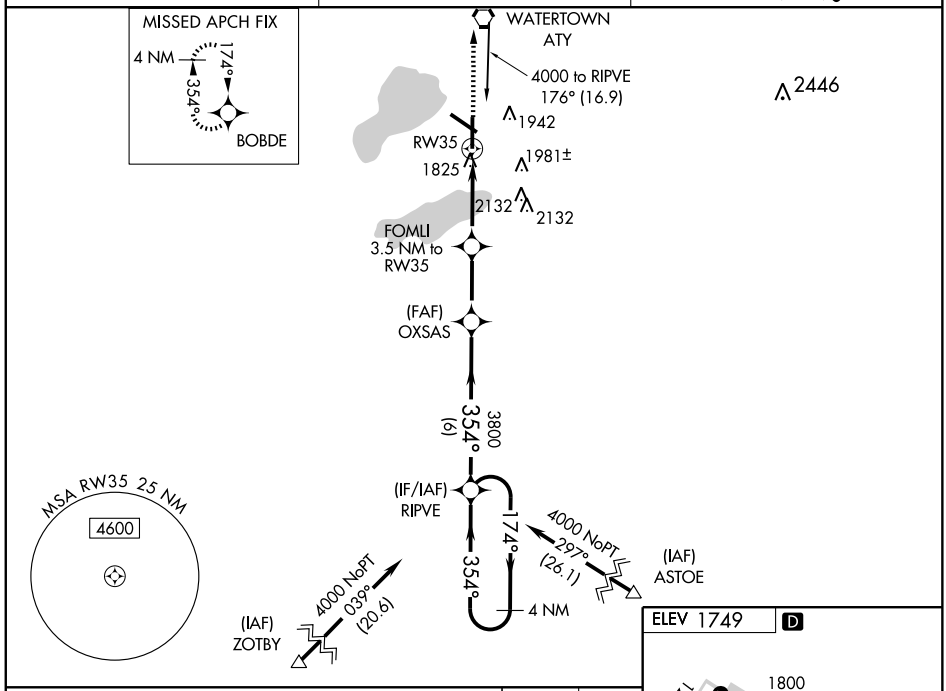
RNAV (GPS) RWY 35
WATERTOWN RGNL (ATY)

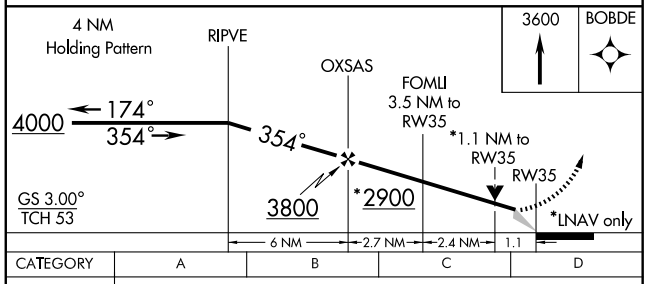
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP -0.3 NA. VDP and Baro-VNAV NA when using Brookings altimeter setting. When local altimeter setting not received, use Brookings altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LNAV/VNAV all Cats visibility ½ mile, increase LNAV Cat C/D visibility ¼ mile. For inoperative MALSR increase LNAV Cat C/D visibility ¼ mile. Inoperative table does not apply to LPV all Cats, LNAV Cats A/B. When using Brookings altimeter setting, inoperative table does not apply to LPV all Cats, LNAV Cats A/B.

MALSR

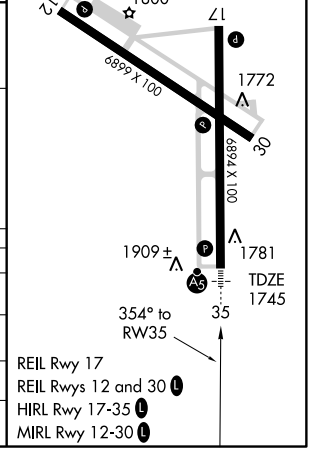
MISSED APPROACH: Climb to 3600 direct BOBDE and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1945-1	200 (200-1)		
LNAV/VNAV DA	2180-1	435 (500-1)		
LNAV MDA	2160-1	415 (500-1)		
CIRCLING	2260-1 511 (600-1)	2260-1½ 511 (600-1½)	2340-2 591 (600-2)	



NC-1. 03 JUN 2010 to 01 JUL 2010

VORTAC ATY	APP CRS	Rwy ldg	6894
116.6	356°	TDZE	1745
Chan 113		Apt Elev	1749

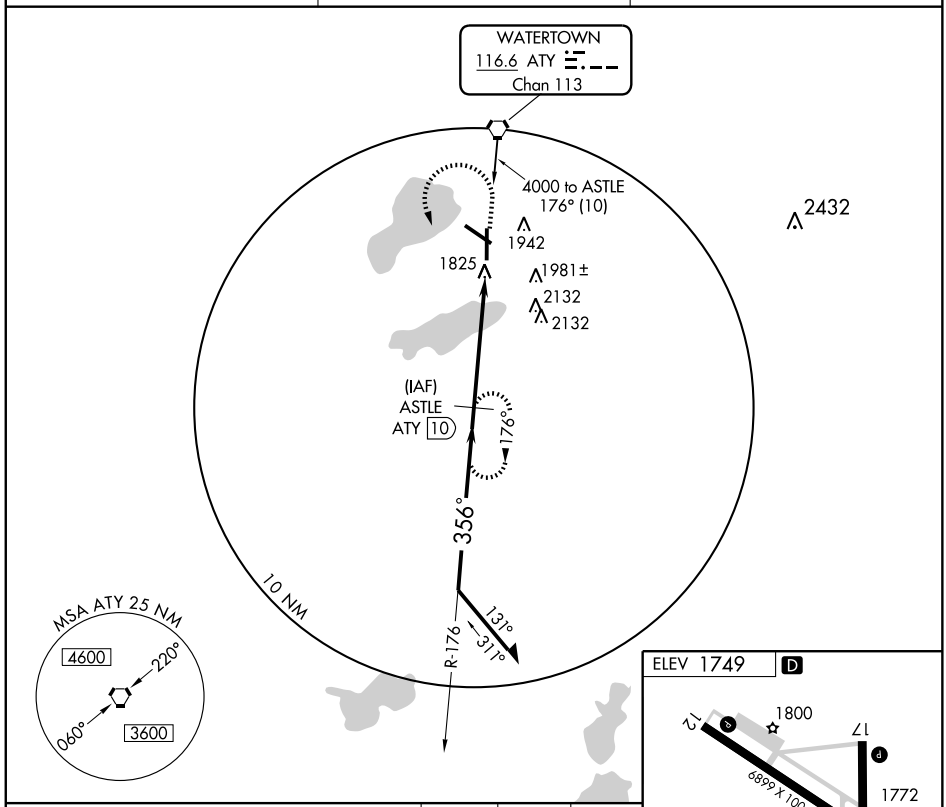
VOR/DME or TACAN RWY 35

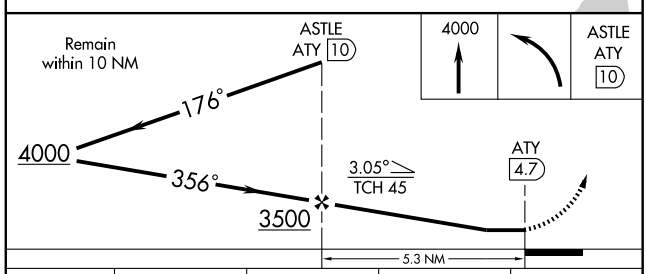
WATERTOWN RGNL (ATY)

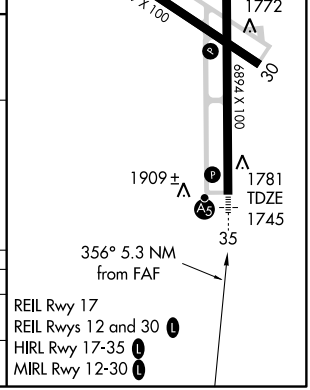
MALSR

MISSED APPROACH: Climb to 4000 then left turn direct ASTLE and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L







CATEGORY	A	B	C	D
S-35	2240-½ 495 (500-½)		2240-¾ 495 (500-¾)	2240-1 495 (500-1)
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

VORTAC ATY	APP CRS	Rwy ldg	6894
116.6	177°	TDZE	1740
Chan 113		Apt Elev	1749

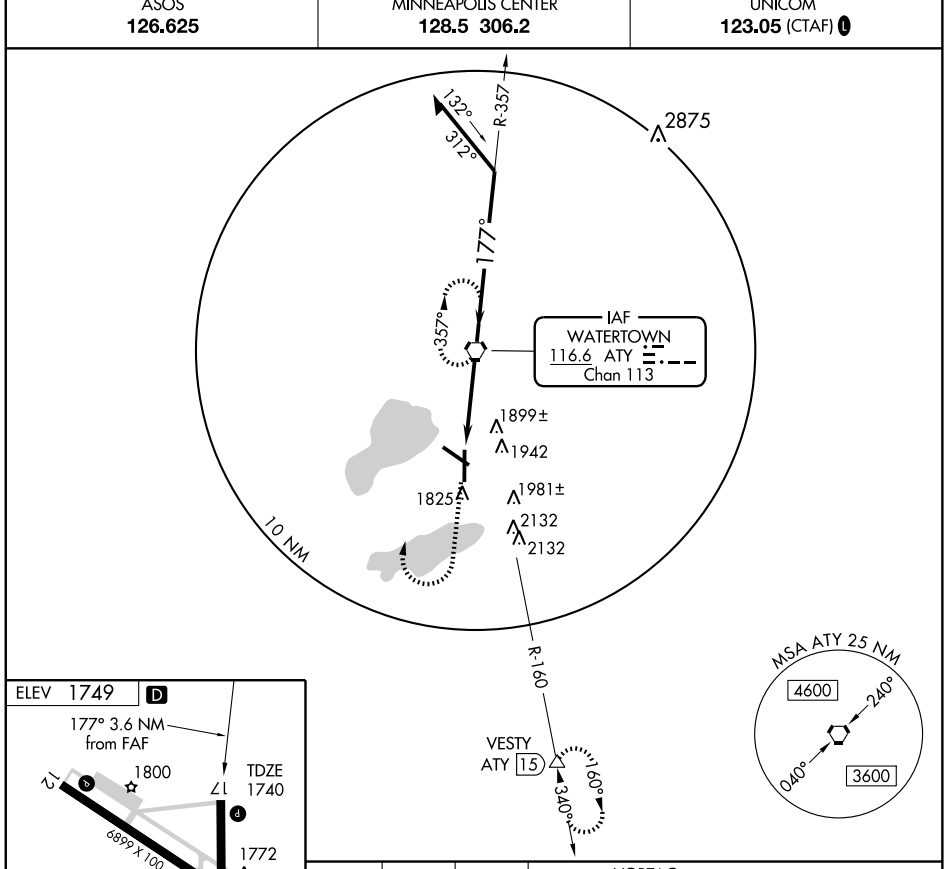
VOR or TACAN RWY 17

WATERTOWN RGNL (ATY)

Visibility reduction by helicopters NA.
If local altimeter not received, use Brookings altimeter setting and increase all MDAs 120 feet.
VDP NA when using Brookings altimeter setting.

MISSED APPROACH: Climb to 2400 then climbing right turn to 4000 direct ATY VORTAC and hold. (TACAN aircraft climb to 5000 via ATY VORTAC R-160 to VESTY/15 DME and hold south, right turns, 340° inbound.)

ASOS	MINNEAPOLIS CENTER	UNICOM
126.625	128.5 306.2	123.05 (CTAF) L



FAF to MAP 3.6 NM					
Knots	60	90	120	150	180
Min:Sec	3:36	2:24	1:48	1:26	1:12

CATEGORY	A	B	C	D
S-17	2200-1	460 (500-1)	2200-1¼ 460 (500-1¼)	2200-1½ 460 (500-1½)
CIRCLING	2260-1	511 (600-1)	2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

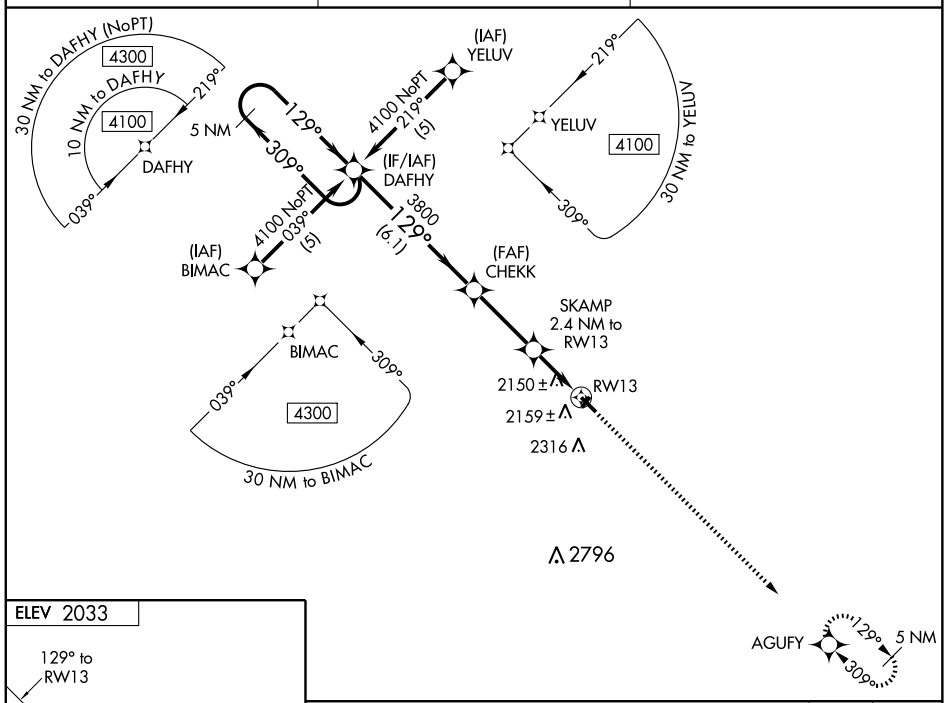
WAAS CH 61212 W13A	APP CRS 129°	Rwy ldg 4500 TDZE 2020 Apt Elev 2033

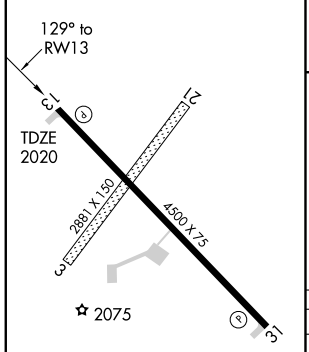
RNAV (GPS) RWY 13
WINNER RGNL (ICR)

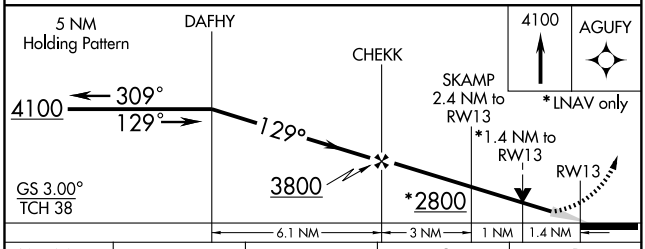
DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F).
Baro-VNAV and VDP NA when using Valentine altimeter setting.
When local altimeter setting not received, use Valentine, NE altimeter setting and increase all DA/MDA 240 feet; increase LPV all Cats visibility ¾ mile, LNAV/VNAV all Cats visibility 1 mile, LNAV Cat C visibility ¾ mile, circling Cat B visibility ¼ mile and Cat C visibility 1 mile.

MISSED APPROACH: Climb to 4100 direct AGUFY and hold.

ASOS	HURON RADIO	UNICOM
126.775	122.1R	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	2270-1 250 (300-1)			NA
LNAV/VNAV DA	2456-1½ 436 (500-1½)			NA
LNAV MDA	2480-1 460 (500-1)		2480-1¼ 460 (500-1¼)	NA
CIRCLING	2580-1 547 (600-1)		2680-1¾ 647 (700-1¾)	NA

NC-1. 03 JUN 2010 to 01 JUL 2010

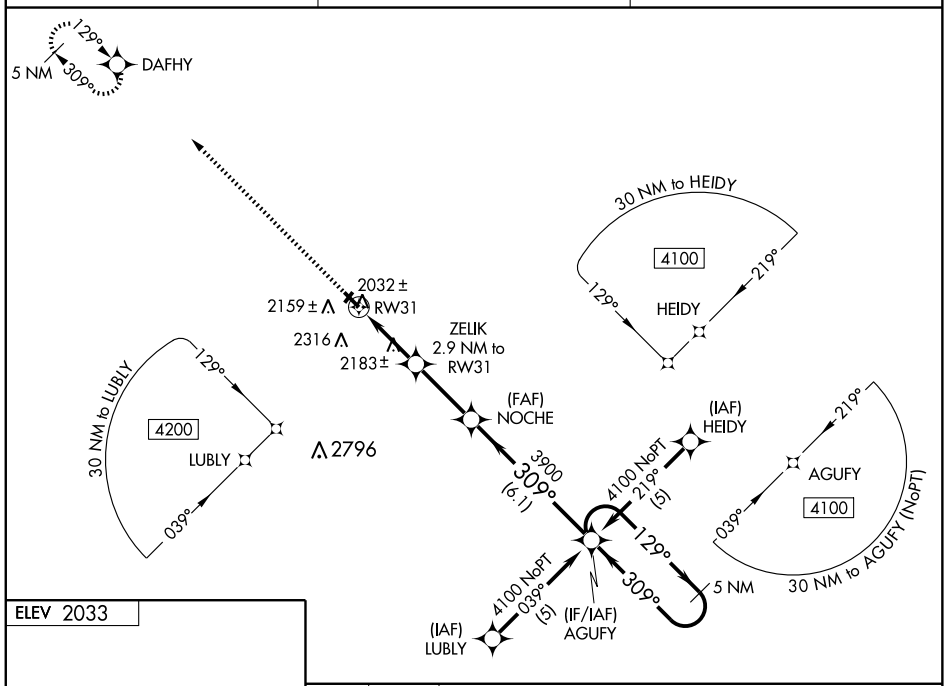
WAAS CH 97612 W31A	APP CRS 309°	Rwy ldg 4500 TDZE 2021 Apt Elev 2033

RNAV (GPS) RWY 31
WINNER RGNL (ICR)

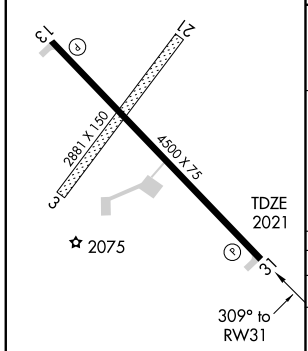
DME/DME RNP-0.3 NA.
When local altimeter setting not received, use Valentine, NE altimeter setting and increase all DA/MDA 240 feet; increase LPV all Cats visibility ¾ mile, LNAV/VNAV all Cats visibility 1 mile, LNAV Cat C visibility ½ mile, circling Cat B visibility ¼ mile and Cat C visibility 1 mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). Baro-VNAV and VDP NA when using Valentine altimeter setting.

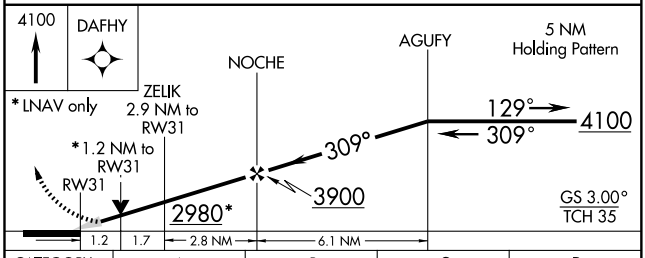
MISSED APPROACH: Climb to 4100 direct DAFHY and hold.

ASOS	HURON RADIO	UNICOM
126.775	122.1R	122.8 (CTAF) L



ELEV 2033





CATEGORY		A	B	C	D
LPV	DA	2271-1 250 (300-1)			NA
LNAV/VNAV	DA	2581-2 560 (600-2)			NA
LNAV MDA		2440-1 419 (500-1)		2440-1¼ 419 (500-1¼)	NA
CIRCLING		2580-1 547 (600-1)		2680-1¾ 647 (700-1¾)	NA

MIRL Rwy 13-31 L

NC-1. 03 JUN 2010 to 01 JUL 2010

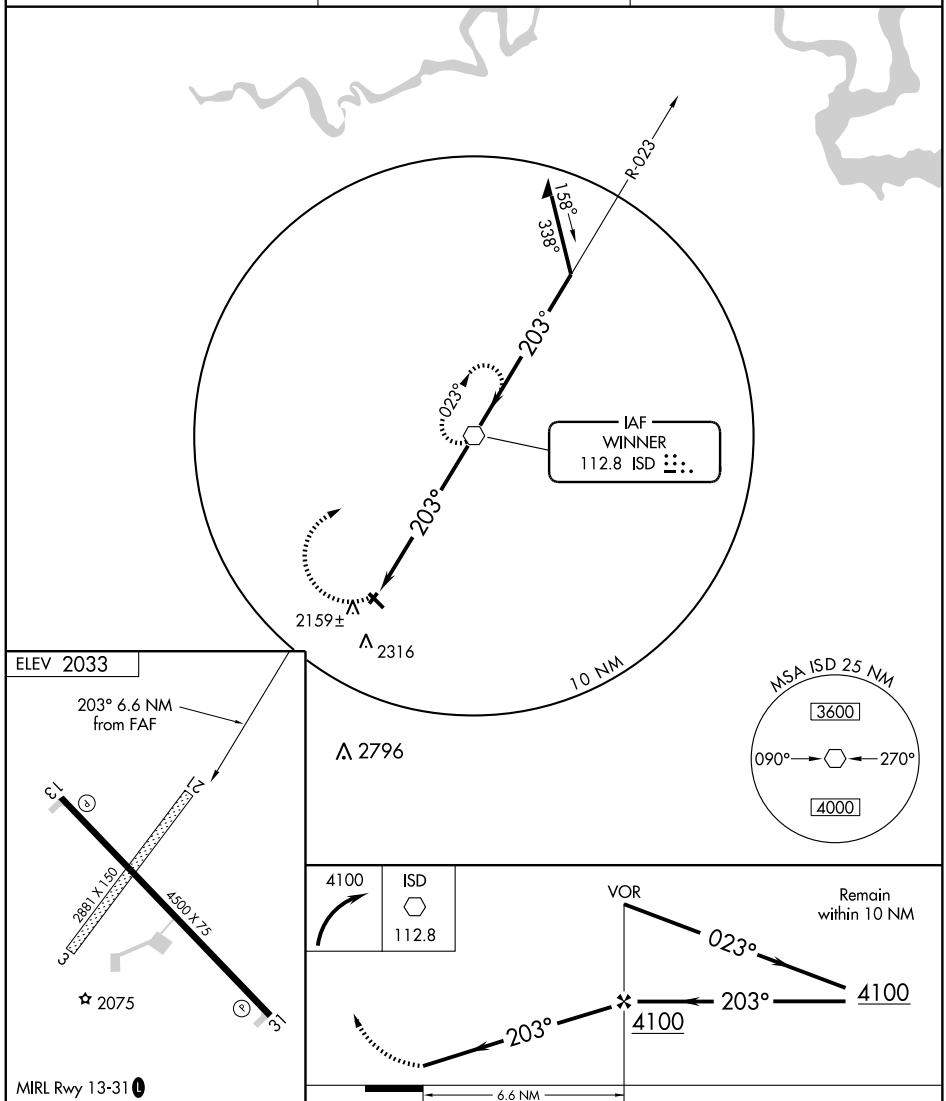
VOR ISD	APP CRS	Rwy ldg	N/A
112.8	203°	TDZE	N/A
		Apt Elev	2033

VOR-A
WINNER RGNL (ICR)

When local altimeter setting not received, use Valentine, NE altimeter setting and increase all MDA 240 feet and visibility Cat B ¼ mile, Cats C and D 1 mile.

MISSED APPROACH: Climbing right turn to 4100 direct ISD VOR and hold.

ASOS	HURON RADIO	UNICOM
126.775	122.1R	122.8 (CTAF) L



FAF to MAP 6.6 NM					
Knots	60	90	120	150	180
Min:Sec	6:36	4:24	3:18	2:38	2:12

CATEGORY	A	B	C	D
CIRCLING	2580-1 547 (600-1)		2680-1¾ 647 (700-1¾)	2680-2 647 (700-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

LOC I-YKN	APP CRS	Rwy ldg	6095
109.5	313°	TDZE	1284
		Apt Elev	1305

ILS RWY 31

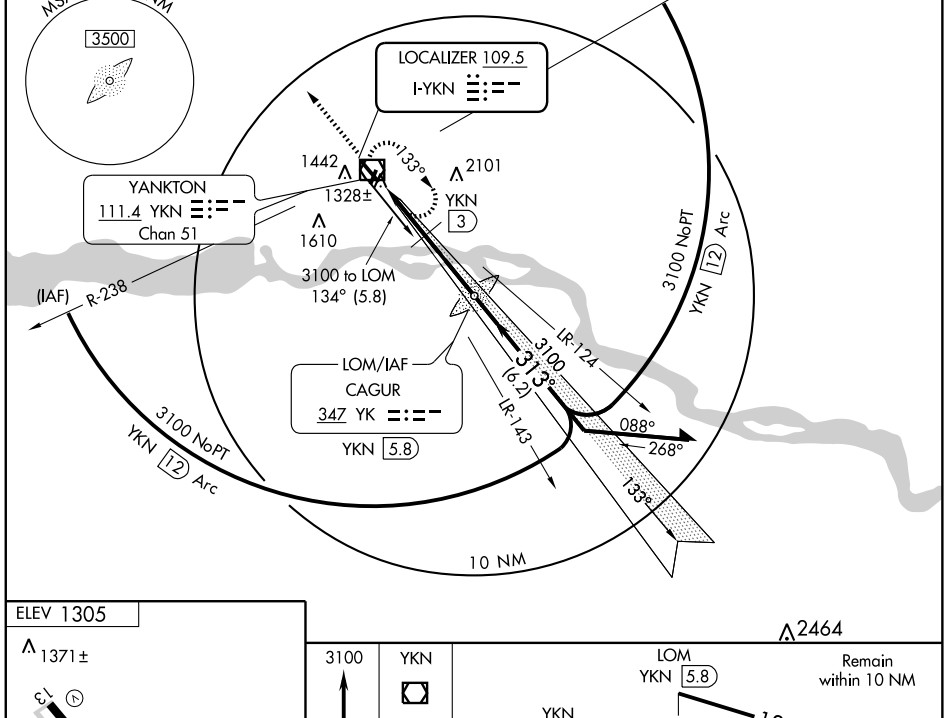
YANKTON/CHAN GURNEY MUNI (YKN)

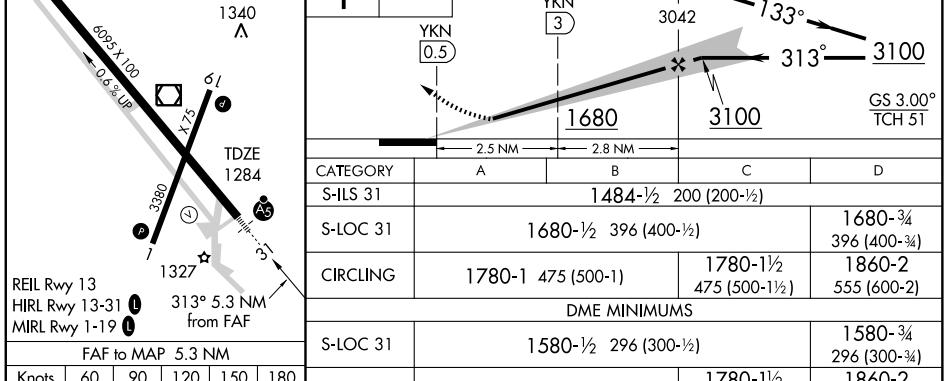
T NA — DME minimums: for inoperative MALSR, increase S-LOC-31 Cat D visibility to 1 mile.

MALSR A5

MISSED APPROACH: Climb to 3100 then direct YKN VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
111.4	124.1 269.0	122.55	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-ILS 31	1484-½ 200 (200-½)			
S-LOC 31	1680-½ 396 (400-½)			1680-¾ 396 (400-¾)
CIRCLING	1780-1 475 (500-1)		1780-1½ 475 (500-1½)	1860-2 555 (600-2)
DME MINIMUMS				
S-LOC 31	1580-½ 296 (300-½)			1580-¾ 296 (300-¾)
CIRCLING	1780-1 475 (500-1)		1780-1½ 475 (500-1½)	1860-2 555 (600-2)

FAF to MAP 5.3 NM

Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

NC-1. 03 JUN 2010 to 01 JUL 2010

LOM YK	APP CRS	Rwy ldg	6095
347	313°	TDZE	1284
		Apt Elev	1305

NDB or GPS RWY 31

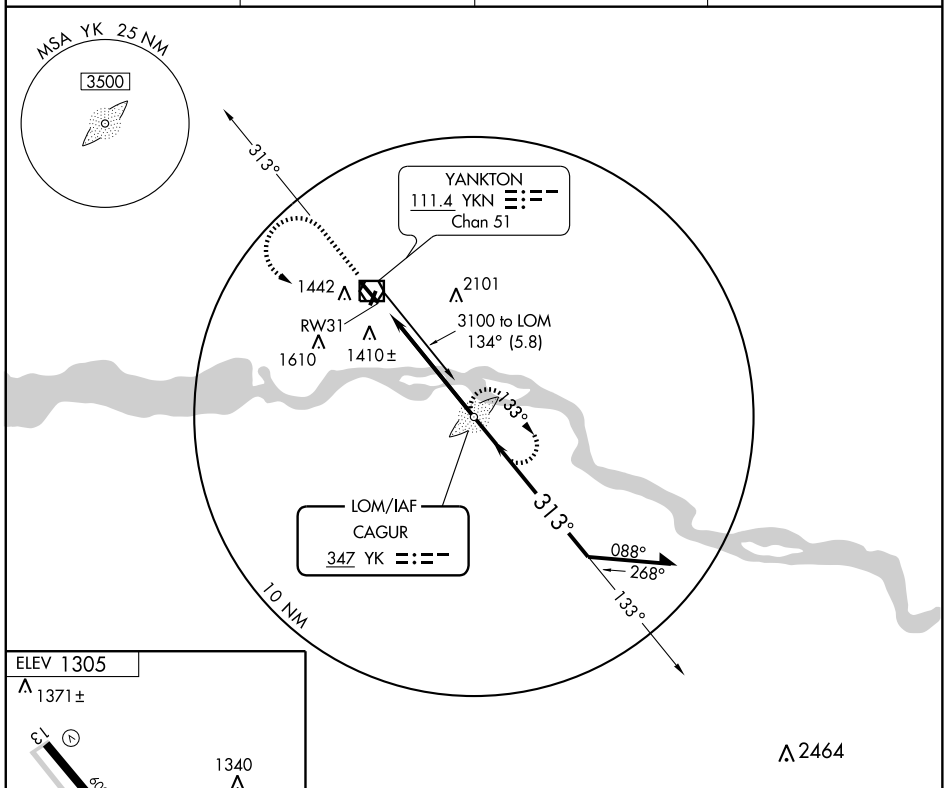
YANKTON/CHAN GURNEY MUNI (YKN)

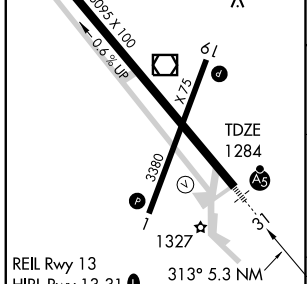
T NA If local altimeter setting not received, use Sioux Falls altimeter setting and increase all MDAs 220 feet.

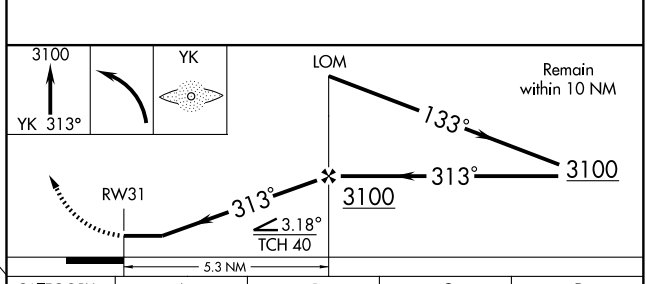
MALSR A5

MISSED APPROACH: Climb to 3100 via YK LOM bearing 313° then left turn direct YK LOM and hold.

AWOS-3	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
111.4	124.1 269.0	122.55	122.8 (CTAF) L







FAF to MAP 5.3 NM					
Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

CATEGORY	A	B	C	D
S-31	1720-¾ 436 (500-¾)			1720-1¼ 436 (500-1¼)
CIRCLING	1780-1 475 (500-1)		1780-1½ 475 (500-1½)	1860-2 555 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

WAAS CH 50400 W13A	APP CRS 133°	Rwy ldg 6095 TDZE 1306 Apt Elev 1306

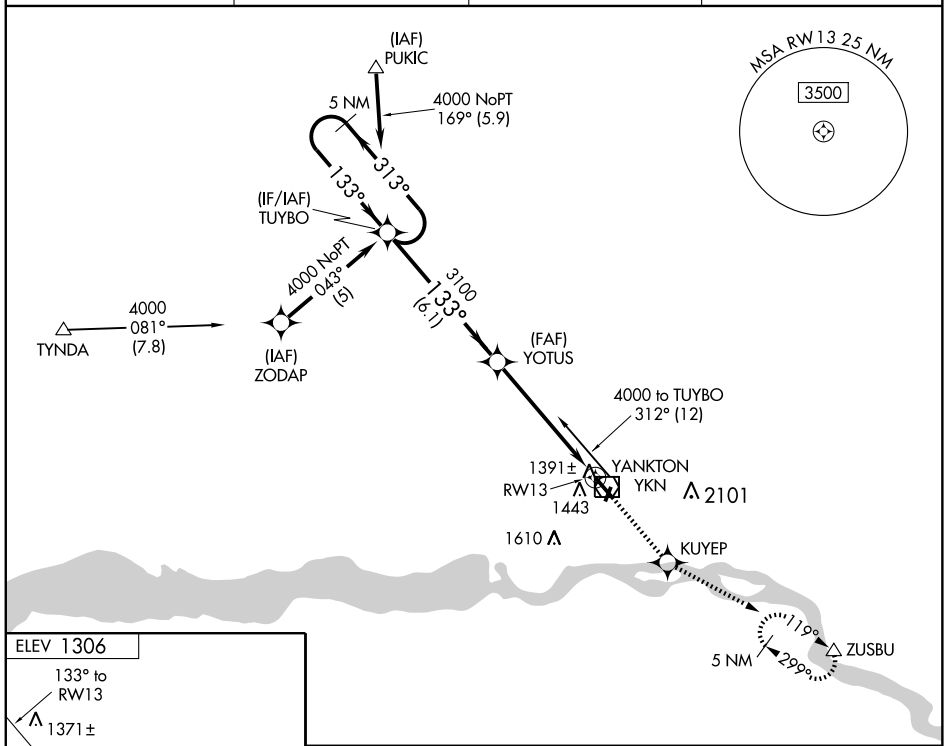
RNAV (GPS) RWY 13

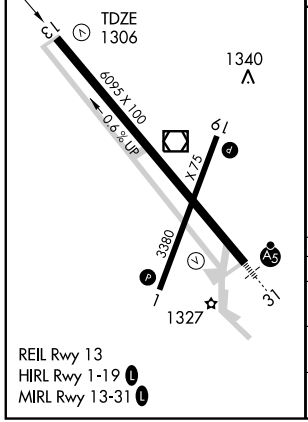
YANKTON/ CHAN GURNEY MUNI (YKN)

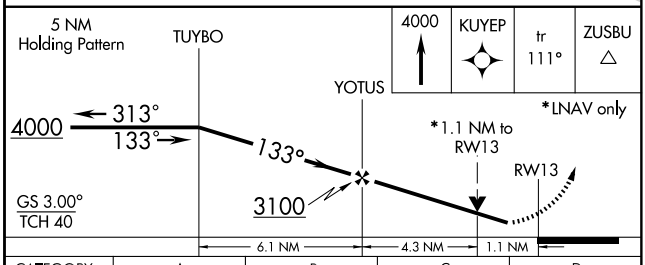
If local altimeter setting not received, use Sioux Falls altimeter setting and increase all DAs/MDAs 140 feet.
DME/DME RNP -0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 4000 direct KUYEP and via 111° track to ZUSBU and hold, continue climb-in-hold to 4000.

AWOS-3	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
111.4	124.1 269.0	122.55	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1556-1 250 (300-1)			
LNAV MDA	1700-1 394 (400-1)			1700-1¼ 394 (400-1¼)
CIRCLING	1780-1 474 (500-1)		1780-1½ 474 (500-1½)	1860-2 554 (600-2)

NC-1. 03 JUN 2010 to 01 JUL 2010

VOR/DME YKN	APP CRS	Rwy ldg	6095
111.4	132°	TDZE	1306
Chan 51		Apt Elev	1306

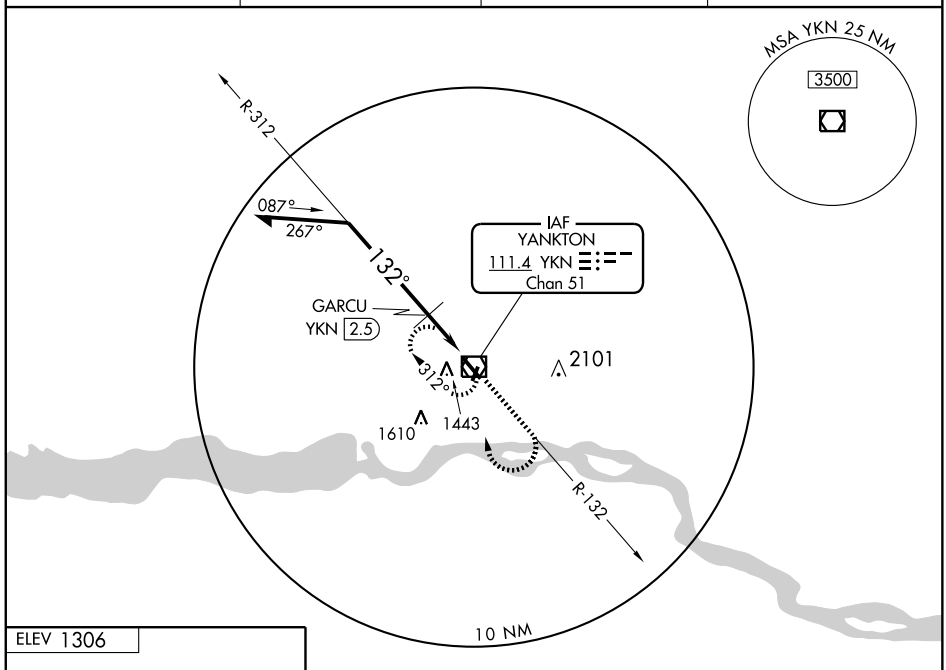
VOR RWY 13

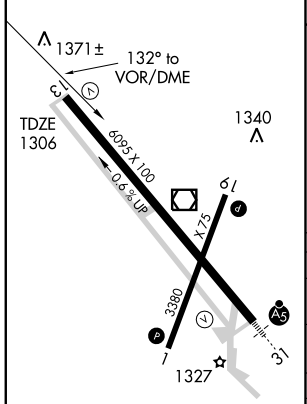
YANKTON/CHAN GURNEY MUNI (YKN)

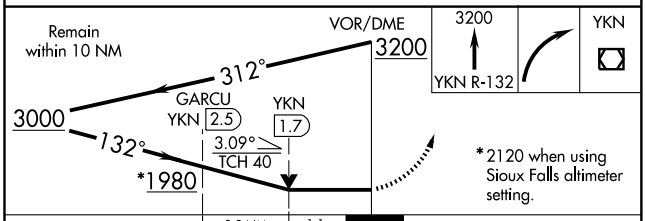
If local altimeter setting not received, use Sioux Falls altimeter setting and increase all MDAs 140 feet.
VDP NA when using Sioux Falls altimeter setting.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3200 via YKN VOR/DME R-132 then right turn direct YKN VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
111.4	124.1 269.0	122.55	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-13	1980-1 674 (700-1)		1980-2 674 (700-2)	1980-2¼ 674 (700-2¼)
CIRCLING	1980-1 674 (700-1)		1980-2 674 (700-2)	1980-2¼ 674 (700-2¼)
GARCU FIX MINIMUMS				
S-13	1700-1 394 (400-1)			1700-1¼ 394 (400-1¼)
CIRCLING	1780-1 474 (500-1)		1780-1½ 474 (500-1½)	1860-2 554 (600-2)

NC-1, 03 JUN 2010 to 01 JUL 2010

VOR/DME YKN	APP CRS	Rwy ldg	6095
111.4	318°	TDZE	1284
Chan 51		Apt Elev	1305

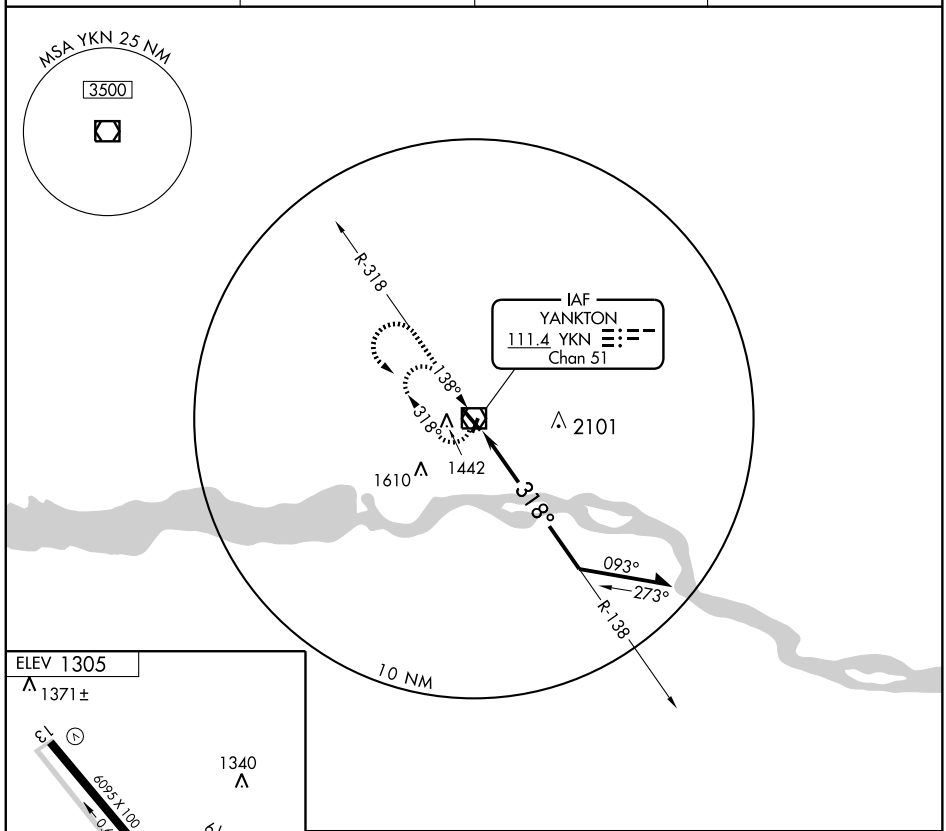
VOR RWY 31

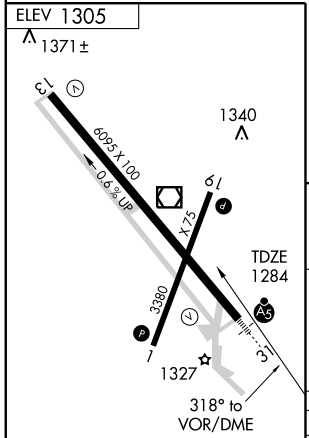
YANKTON/CHAN GURNEY MUNI (YKN)

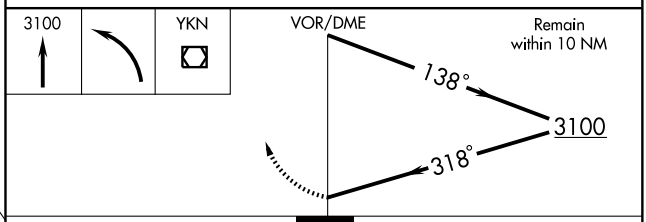
MALSR

MISSED APPROACH: Climb to 3100, then left turn direct YKN VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	HURON RADIO	UNICOM
111.4	124.1 269.0	122.55	122.8 (CTAF) L







REIL Rwy 13
HIRL Rwy 13-31 L
MIRL Rwy 1-19 L

CATEGORY	A	B	C	D
S-31	1980-½ 696 (700-½)		1980-1½ 696 (700-1½)	1980-1¾ 696 (700-1¾)
CIRCLING	1980-1 675 (700-1)		1980-2 675 (700-2)	1980-2¼ 675 (700-2¼)

NC-1. 03 JUN 2010 to 01 JUL 2010